

## SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 686 experiments for

(no ligands specified)

2 metals : Pd(IV), Pd++

(no references specified)

(no experimental details specified)

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e- HL Electron (442)

Electron;

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

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Pd(IV) EMF none 18°C 0.0 U 1924JJa (793) 1

K=42.3(1220mV)

K'=32.9(950mV)

K: Pd03(s)+2H+2e=Pd02(s)+H2O. K': Pd02(s)+2H+2e=Pd0(s)+H2O

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

Bromide;

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

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Pd(IV) EMF NaClO4 25°C 0.40M U 1971DUa (2221) 2

K5=3.48

K6=2.64

Medium: HClO4

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

Chloride;

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

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Pd(IV) EMF NaClO4 25°C 0.40M U 1971DUa (5441) 3

K5K6=4.22

Medium: HClO4

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Pd(IV) sol NaCl 25°C 1.0M U 1930WEa (5442) 4

K(K2PdL6(s)=2K+PdL6)=-5.22

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e- HL Electron (442)

Electron;

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

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Pd++ vlt none 25°C 0.00 U 1971JPa (794) 5

K(Pd + 2e=Pd(s))=30.8(0.91V)

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Pd++ EMF oth/un 25°C 4.00M U T 1970IEa (795) 6

$$K(Pd + 2e = Pd(s)) = 33.1(979 \text{ mV})$$

Medium: HC104. K=34.8(978mV,10 C), 34.2(979mV,15 C), 33.5(975mV,20 C), 32.5  
(978mV,30 C), 31.8(972mV,35 C), 30.9(960mV,40 C)(m units)

Method:Literature evaluated data. K':  $Pd(IV)I_6 + 2e = PdI_4 + 2I$

Method:Literature evaluated data

Method:Literature evaluated data.  $K(PdBr_4 + 2e = Pd(s) + 4Br) = 16.6(0.49V)$ ,  $K(PdI_4 + 2e = Pd(s) + 4I) = 6.1(0.18V)$

Pd++ EMF NaClO<sub>4</sub> 25°C 4.87M U I 1968LMb (799) 10  
 $K(Pd+2e=Pd(s))=33.67, 996 \text{ mV}$

Medium: HCl04. I=3.46: K=32.19, 952 mV; I=2.22: K=31.25, 924.4 mV;

I=1.06: K=31.11, 920 mV

Pd++      EMF none    25°C    0.0    M    H      1967IEa    (800)    11  
 $K(Pd+2e=Pd(s))=30.9, 915 \text{ mV}$

By calorimetry, 0.1 M NaI:  $\Delta H(Pd + 3I = Pd(s) + I_3^-) = -104.1 \text{ kJ mol}^{-1}$

Pd++ EMF oth/un 25°C ? U M 1965BKc (801) 12  
                           K=38.21, 1130 mV (X=Cl)  
                           K=23.40, 692 mV (X=Br)  
                           K=21.13, 625 mV (X=I)

$$K: Pd(en)_2X_2 + 2e^- \rightarrow Pd(en)_2 + 2X$$

K:  $\text{Pd(II)}\text{Br}_4 + 2e = \text{Pd(s)} + 4\text{Br}$ . From thermodynamic data

$K(PdO_2(s) + H_2O + 2e = PdO(s) + 2OH) = 25 \text{ (730 mV)}$  estimated

Pd++ EMF KCl 25°C 1.0M U T 1943TWa (803) 14  
 $K=21.0(621 \text{ mV})$

Medium: HCl. K:  $PdCl_4 + 2e = Pd(s) + 4Cl^-$ . At 15 °C:  $K = 21.8$  (623 mV), 35 °C: 20.3 (619 mV). In 4 M HClO<sub>4</sub>:  $K(Pd(II) + 2e = Pd(s)) = 33.4$  (987 mV)

Pd++ EMF NaCl 25°C 1.0M U I 1942GSa (804) 15  
 $K=44.0(1301 \text{ mV})$

$K(Pd(IV)Cl_6 + 2e^- = Pd(II)Cl_4 + 2Cl^-)$ . In 1 M HCl:  $K = 43.5$  (1286 mV). In 1 M KBr:  $K(PdBr_6 + 2e^- = PdBr_4 + 2Br^-) = 33.6$  (994 mV). 1 M KI:  $K(PdI_6 + 2e^- = PdI_4 + 2I^-) = 16.3$  (482 mV)

Pd++ oth KCl 25°C 1.0M U 1930WEa (805) 16  
K=-3.62

Medium: HC1. K: Pd(IV)Cl<sub>6</sub>=Pd(II)Cl<sub>4</sub>+Cl<sub>2</sub>(aq). Method:chemical analysis

$K(Pd(IV)C16+2e^- = Pd(II)C14+2Cl^-) = 43.56 \text{ (1288 mV)}$  from thermodynamic data

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO4	25°C	1.0M	U	M			1973ELa (2222)	17
$K(\text{cis-trans-PdL}_2(\text{H}_2\text{O}))=0.78$ $K_2(\text{cis})=4.19$ $K_2(\text{trans})=3.41$ $K_3(\text{cis})=3.37$										
Medium: HClO4. $K_3(\text{trans})=4.15$ . Kn: $\text{PdL}_2(\text{H}_2\text{O})_2+n\text{L}$										
Pd++	sp	NaClO4	?	1.0M	U		K1=2.23		1973GSc (2223)	18
$K_1=5.17$ $B_2=9.42$ $B_3=12.7$ $B_4=14.9$										
Pd++	sp	NaClO4	25°C	1.0M	U				1972ELa (2224)	19

Medium: HClO<sub>4</sub>

Pd++ sp NaClO<sub>4</sub> 25°C 4.50M U M 1972FKa (2225) 20  
 $K(PdCl_4 + L \rightleftharpoons PdCl_3L + Cl^-) = 1.40$   
 $K(PdCl_3L + L \rightleftharpoons PdCl_2L_2 + Cl^-) = 1.06$   
 $K(PdCl_2L_2 + L \rightleftharpoons PdCl_1L_3 + Cl^-) = 0.72$   
 $K(PdCl_1L_3 + L \rightleftharpoons PdL_4 + Cl^-) = 0.27$

Medium: LiClO<sub>4</sub>

Pd++ cal NaClO<sub>4</sub> 25°C 1.0M U H 1972RHa (2226) 21  
 Medium: HClO<sub>4</sub>. DH(K1)=-21.3 kJ mol<sup>-1</sup>, DS(K1)=27.2 J K<sup>-1</sup> mol<sup>-1</sup>

Medium: HESI1: D1(R1) 211.5 R5 M51 1, D5(R1) 277.2 3 R1 M51 1

B4=19.0

B4=16.2(0%), also B4 for several other % dioxan. At 40 C: B4=18.1(71%) 15.3(0%)

Pd++ sol NaClO<sub>4</sub> 20°C 0.10M U K1=6.8 1967GGa (2228) 23

Pd++ cal oth/un 25°C 0.10M U H 1967IWa (2229) 24  
 Medium:NaBr. DH(B4)=-54.8 kJ mol<sup>-1</sup>

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Pd++ g1 NaClO4 var var U 1967Kpc (2230) 25  
 $K(PdBr_3OH + Br = PdBr_4 + OH) = -4.23$

19-50 C, I=0.1-1.0

Pd++ sp NaCl 25°C 1.0M U 1966BSa (2231) 26  
 B4=13.05

Pd++ sp NaClO<sub>4</sub> 45°C 1.80M U T H 1966SBb (2232) 27  
 $K_4=2.16$

K4=2.50(10 C), 2.30(25 C). DH(K4)=-18.0 kJ mol-1, DS=-14.6 J K-1 mol-1

Pd++ ISE oth/un 25°C var U 1965FKa (2233) 28  
B4=14

Medium:KBr var. Also values for B4 at 10-60C assuming same K and 1/RTF as for 25C!

Pd++ sol oth/un 20°C 0.60M U I 1964PBa (2234) 29  
B3=11.28  
B4=13.42 ?  
Kso=-12.54  
K(PdL2(s)=PdL2)=-4.4

At I=0.4: Kso=12.96, K=-4.5, K(PdL2(s)+L)=-1.36, B3=11.60, B4=13.40?, K3=3.1, K4=1.8

Pd++ sp NaClO4 25°C 0.50M U 1964SBe (2235) 30  
K4=2.20

Pd++ sp NaClO4 20°C 0.80M U K1=4.37 1964SLb (2236) 31  
K4=3.50

Medium:0.8(ClO4),0.6 H+. By hypothesis method:K2=4.08, K3=3.79

Pd++ ISE oth/un 19°C var U 1963GKa (2237) 32  
B4=16.1

Pd++ oth none 25°C 0.0 U 1952LAb (2238) 33  
B4=13.10

Method: from thermodynamic data; I=0 corr.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ ISE oth/un 25°C ? C 1976HEb (2752) 34  
B4=63 (60<B4<65)  
K(Pd(CN)2(s)+2CN)=20.8  
Kso(Pd(CN)2)=-42

Pd++ sol NaClO4 20°C 0.10M U K1=10.5 1967GGa (2753) 35

Pd++ ISE oth/un 25°C 0.0 U H 1967IWa (2754) 36  
B4=42.4  
K5=2.9

Medium:0 corr. By calorimetry:DH(B4)=-385.8 kJ mol-1, DS=-485 J K-1 mol-1;  
DH(K5)=-0.8, DS=33. DH(PdBr4+4L=PdL4+4Br)=-329

Pd++ ISE oth/un 25°C var U T 1965FKa (2755) 37  
B4=51.6  
K(Pd+2e=Pd(s))=33.4

Medium: KCN var

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

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

Pd++ sp NaCl 25°C 0.11M C I M 2003CBa (3345) 38

Data for 0.105-1.0 M NaCl + H3B03.  $K(PdCl_4+HCO_3=Pd(CO_3)Cl_3+H+Cl)=-6.68$

$K=-6.50$  ( $I=0.305$ ), -6.62 ( $I=0.505$ ), -6.71 ( $I=0.705$ ), -6.95 ( $I=1.005$ )

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

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

Pd++ sp NaCl 25°C 0.11M C I M 2003CBa (5443) 39

$K(PdCl_3+Cl)=1.08$

Data for 0.105-1.0 M NaCl, pH 3.0-8.5.  $K(PdCl_4+H_2O=Pd(OH)Cl_3+H+Cl)=-8.72$ .

$K=-8.89$  ( $I=0.305$ ), -8.97 ( $I=0.505$ ), -8.98 ( $I=0.705$ ), -8.96 ( $I=1.005$ )

Pd++ sp NaCl 25°C 0.50M C 2000BYa (5444) 40

\* $K(PdCl_4)=-8.98$

\*K:  $PdCl_4+H_2O=PdCl_3(OH)+H$ .

Pd++ sol KCl 25°C 0.10M C TI M 1999VWa (5445) 41

$B_4=11.81$

$K(Pd+3Cl+OH)=20.21$

Data for 20°C and  $I=0.8$  m and for 25°C and  $I=0.1-1.0$  m. At  $I=0$ ,  $B_4=11.29$ ,  
 $K(Pd+3Cl+OH)=20.29$ .

Pd++ sp NaNO3 37°C 0.16M C M 1998ESa (5446) 42

$K(PdAH_2O)_2+Cl)=3.563$

$K(PdA(H_2O)Cl+Cl)=2.28$

A is 1,3-diaminopropane.

Pd++ gl NaClO4 37°C 0.15M C M 1996GTa (5447) 43

$K(PdA(H_2O)_2+L)=3.65$

$K(PdA(H_2O)_2+2L)=5.86$

\* $K(PdA(H_2O)_2+L)=-2.68$

A=diaminosuccinate diethylester, EtO2CCH(NH2).CH(NH2)CO2Et

\*K:  $PdA(H_2O)_2+L=PdA(H_2O)(OH)L+H$

Pd++ sol NaCl 100°C 1.0M U T 1995GAa (5448) 44

$K_3=0.30$

Method: solubility of AgCl in Pt solution, 0.03-3.0 m HCl.

At 200°C,  $K_3=1.20$ , at 300°C,  $K_3=1.36$

Pd++ kin NaClO4 25°C 0.10M U M 1993SHa (5449) 45

$K_{out}(PdABH_2O+L)=2.28$

Kout(PdACH<sub>2</sub>O+L)=1.86  
A=N,N,N',N'-Tetraethyldiaminoethane, B=Inosine, C=Inosine-5'-monophosphate

Pd++ sp oth/un 19°C var U TI 1991TJa (5450) 46  
K3=2.60  
K4=1.25

19-90 C. Constants at I=0

Pd++ nmr non-aq 24°C 100% U IHM 1982HBa (5451) 47  
K(PdI<sub>2</sub>+PdL<sub>2</sub>=2PdIL)=0.79  
K(PdBr<sub>2</sub>+PdL<sub>2</sub>=2PdBrL)=0.63  
K(PdCl<sub>2</sub>+PdL<sub>2</sub>=2PdClL)=0.61

Medium: CH<sub>2</sub>Cl<sub>2</sub>; Pd as Pd<sub>2</sub>(bis(diphenylphosphino)methane)<sub>2</sub>

For iodide complex, DH=-5.0 kJ mol<sup>-1</sup>, DS=12.6 J K<sup>-1</sup> mol<sup>-1</sup>

Pd++ oth NaClO<sub>4</sub> 25°C 0.0 M I K1=5.08 B2= 8.88 1980KRa (5452) 48  
K3=2.42  
K4=0.88

Analysis of literature data using Pitzer coefficients. Data for 0.05 to 2.0 M NaClO<sub>4</sub>. Equation given for ionic strength dependence.

Pd++ sp NaClO<sub>4</sub> 25°C 0.86M U K1=4.0 B2=7.2 1976YBa (5453) 49  
K3=2.3

When I=0.1 M NaClO<sub>4</sub>: K1=6.0, K2=4.6, K3=2.5

Pd++ sp non-aq 20°C 100% U I 1974V0a (5454) 50  
K(Pd<sub>2</sub>L<sub>4</sub>+2L=Pd<sub>2</sub>L<sub>6</sub>)=6.4  
K(Li+Pd<sub>2</sub>L<sub>6</sub>)=1.7

Medium: MeCN, LiCl at different concentrations. With Me<sub>4</sub>NCl, values are:  
7.8, 1.5

Pd++ kin NaClO<sub>4</sub> 25°C 1.0M U M 1973ELa (5455) 51  
K<sub>2</sub>(cis)=3.11  
K<sub>2</sub>(trans)=2.79  
K<sub>3</sub>(cis)=2.59  
K<sub>3</sub>(trans)=2.90

Medium: HClO<sub>4</sub>. K(cis-PdL<sub>2</sub>(H<sub>2</sub>O)<sub>2</sub>=trans-PdL<sub>2</sub>(H<sub>2</sub>O)<sub>2</sub>)=0.32

Pd++ sp NaClO<sub>4</sub> ? 1.0M U 1973GSc (5456) 52  
K4=1.27

Pd++ sp non-aq ? 100% U M 1973KFa (5457) 53  
K(PdBr<sub>4</sub>+L=PdBr<sub>3</sub>L+Br)=1.24  
K(PdBr<sub>3</sub>L+L=PdBr<sub>2</sub>L<sub>2</sub>+Br)=1.84  
K(PdBr<sub>2</sub>L<sub>2</sub>+L=PdBrL<sub>3</sub>+Br)=2.50  
K(PdBrL<sub>3</sub>+L=PdL<sub>4</sub>+Br)=2.39

Medium: MeCN, 1.5 M Bu<sub>4</sub>N(Cl,Br)

Pd++ sp NaClO<sub>4</sub> 25°C 1.0M U K1=4.47 B2=7.76 1972ELa (5458) 54  
B3=10.2

B4=11.5

Medium: HClO<sub>4</sub>

Pd++ cal NaClO<sub>4</sub> 25°C 1.0M U H 1972RHa (5459) 55  
Medium: HClO<sub>4</sub>. DH(K1)=-12.7 kJ mol<sup>-1</sup>, DS=43.1 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-10.8,  
DS=26.8; DH(K3)=-10.7, DS=10.0; DH(K4)=-14.2, DS(K4)=-21.8

Pd++ oth non-aq 37°C 100% U M 1971HMb (5460) 56  
K(Li<sub>2</sub>Pd<sub>2</sub>L<sub>6</sub>+2LiL=2Li<sub>2</sub>PdL<sub>4</sub>)=-1.0

Medium: CH<sub>3</sub>COOH. Method: vapor phase osmometry

Pd++ vlt NaClO<sub>4</sub> 25°C 0.20M U 1971JPa (5461) 57  
B3=7.94  
K4=1.44

Medium: HClO<sub>4</sub>

Pd++ EMF oth/un 25°C 3.0M U 1971KKh (5462) 58  
K3=1.76  
K4=2.35

Medium: H<sub>2</sub>SO<sub>4</sub>

Pd++ sp NaClO<sub>4</sub> ? 1.0M U K1=3.48 B2=6.27 1970RGa (5463) 59  
K3=2.35  
K4=1.1

Pd++ EMF oth/un ? var U K1=4.7 B2=7.70 1969GKd (5464) 60  
K3=2.6  
K4=1.6

Pd++ EMF NaClO<sub>4</sub> 25°C 1.0M U 1969KSc (5465) 61  
B4=12.15

Medium: H(ClO<sub>4</sub>,SO<sub>4</sub>)

Pd++ ISE diox/w 25°C 72% U TI K1=17.7 1968GFc (5466) 62  
Also B4 for several dioxan percentages. At 40 C: B4=16.6(72% dioxan)

Pd++ sp NaClO<sub>4</sub> 25°C 4.0M U TI 1968LEc (5467) 63  
K4=2.00

Medium: LiClO<sub>4</sub>. K4=1.77(I=3),1.59(I=2),1.43(I=1)  
At I=2: K4=1.68(15 C),1.59(25 C),1.51(40 C)

Pd++ ISE NaClO<sub>4</sub> 25°C 3.40M U I 1968LMb (5468) 64  
B4=11.4

Medium: HClO<sub>4</sub>. By spectrophotometry:K4=1.77(I=3.4), 1.44(I=1.07)

Pd++ con oth/un 25°C dil U 1967CMb (5469) 65  
K(Pd(NH<sub>3</sub>)<sub>2</sub>L+L)=2.55 ?

Pd++ sol NaClO<sub>4</sub> 25°C 0.10M U K1=5.1 1967GGa (5470) 66

Pd++	cal	NaCl	25°C	0.10M	U	H	1967IWa (5471)	67
DH(B4)=-23.0 kJ mol-1								
Pd++	gl	NaClO4	var	var	U		1967KPC (5472)	68
K(PdCl3OH+Cl=PdCl4+OH)=-5.7								
Pd++	gl	R4N.X	25°C	var	U T		1967RBc (5473)	69
K(Pd(NH3)2L+L)=2.33 K(Pd(NH3)3+L)=3.0								
Medium:NH4(NO3). Also other constants and values at 30 C by spec.								
Pd++	sp	oth/un	25°C	1.0M	U T H	K1=4.00 B3=9.73 B4=11.11	1966SBb (5474)	70
Med:1.0(NaClO4),0.8 H+. K4=1.50(10 C), 1.42(25 C), 1.28(45 C). DH(B4)=-11.7 kJ mol-1, DS=-12.1 J K-1 mol-1								
Pd++	ISE	KCl	25°C	1.0M	U	B4=11.8 K(Pd+2e=Pd(s))=33.4	1965FKa (5475)	71
also B4 values for 10-60C, assuming same K and 1/RTF as for 25C!								
Pd++	sp	oth/un	25°C	0.0	U I	K1=6.0 K3=2.5 K4=2.0 B4=15.1	1964BSg (5476)	72
also B4 for I=0.25 to 1.01 M NaClO4								
Pd++	oth	oth/un	25°C	1.0M	U	K1=3.88 K3=2.14 K4=1.34 B4=10.42	1964BUa (5477)	73
K1 by solubility, otheres by EMF, spec,								
Pd++	sp	NaClO4	25°C	0.50M	U	K4=1.35	1964SBe (5478)	74
Pd++	ISE	oth/un	19°C	var	U	B4=12.2 K(Pd+2e=Pd(s))=33.4	1963GKa (5479)	75
Pd++	sol	none	25°C	0.0	U M	Ks=-3.02 K(trans-Pd(NH3)2L+L)=2.41	1962REa (5480)	76
I=0 corr. Ks: Pd(NH3)2L2(s)=Pd(NH3)2L2								
Pd++	sp	NaClO4	20°C	0.80M	U	K1=4.34 K3=2.68 K4=1.68 B4=12.24	1961SLc (5481)	77

Pd++ sp none 21°C 0.0 U T H K1=6.2 B2=10.9 1957DBa (5482) 78  
 K3=2.5  
 K4=2.6

DH(K1)=-33 kJ mol-1, DS=4.2 J K-1 mol-1; DH(K2)=-38, DS=-42; DH(K3)=-33, DS=-59; DH(K4)=-33, DS=-59. 38 C: K1=5.9, K2=4.1, K3=2.2, K4=2.5

Pd++ sp none 25°C 0.0 U T H K1=6.1 B2=10.7 1956DRA (5483) 79  
 K3=2.4  
 K4=2.6  
 K5=-2.1  
 K6=-2.1

DH(K5)=0, DS=-38 J K-1 mol-1; DH(K6)=0, DS=-38

Pd++ ISE NaClO<sub>4</sub> 25°C 4.0M U 1943TWa (5484) 80  
 B4=13.22

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 FC<sub>1</sub>BrI HL (541)  
 Halides, comparative (for book data under ligand 80)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sol	NaClO <sub>4</sub>	20°C	0.10M	U	M		K(Pd+Cl)=5.1 K(Pd+Br)=6.8 K(Pd+I)=10.0 K(Pd+CN)=10.5	1967GGd	(7412) 81

Pd++ sp oth/un 27°C 0.50M U HM 1967HPb (7413) 82  
 K(PdACl+I=PdAI+Cl)=1.95  
 K(PdABr+I=PdAI+Br)=1.48  
 K(PdABr+SCN)=2.23

A=dien. DH(Cl,I)=-15.5 kJ mol-1, DS=-14.2 j k-1 MOL-1. DH(Br,I)=-10.5, DS=-7; DH(Br,SCN)=-19.6, DS=-22.6. Also other related data

Pd++ sp NaClO<sub>4</sub> 25?°C 4.50M U 1967SNa (7414) 83  
 K(PdBr<sub>4</sub>+I=PdBr<sub>3</sub>I+Br)=2.75  
 K(PdBr<sub>3</sub>I+I)=3.00  
 K(PdBr<sub>2</sub>I<sub>2</sub>+I)=1.70  
 K(PdBrI<sub>3</sub>+I=PdI<sub>4</sub>+Br)=0.80

Pd++ sp oth/un 25°C 1.10M U 1966BSd (7415) 84  
 K(PdCl<sub>4</sub>+2Br=PdCl<sub>2</sub>Br<sub>2</sub>+2Cl)=1.99  
 K(PdCl<sub>2</sub>Br<sub>2</sub>+2Br=PdBr<sub>4</sub>+2Cl)=-.06  
 B(PdCl<sub>2</sub>Br<sub>2</sub>)=13.11  
 B(PdCl<sub>4</sub>)=11.12

Pd++ sp NaClO<sub>4</sub> 25°C 4.50M U M 1966SNc (7416) 85  
 K(PdCl<sub>4</sub>+Br=PdCl<sub>3</sub>Br+Cl)=1.55  
 K(PdCl<sub>3</sub>Br+Br=PdCl<sub>2</sub>Br<sub>2</sub>+Cl)=1.09

$$K(PdCl_2Br_2 + Br = PdClBr_3 + Cl) = 0.95$$

$$K(PdClBr_3 + Br = PdBr_4 + Cl) = 0.55$$

Medium: LiClO<sub>4</sub>

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO <sub>4</sub>	25°C	1.00M	U			K1=6.08	1986E0a	(8319) 86
Pd++	sp	NaClO <sub>4</sub>	25°C	1.0M	U				1977E0b	(8320) 87
								K4=2.56 K(2PdL4=Pd2L6+2L)=1.32		
Pd++	sp	NaClO <sub>4</sub>	25°C	4.50M	U	M			1972SNC	(8321) 88
								K(PdCl <sub>4</sub> +L=PdCl <sub>3</sub> L+Cl)=3.95 K(PdCl <sub>3</sub> L=PdCl <sub>2</sub> L <sub>2</sub> +Cl)=4.1 K(PdCl <sub>2</sub> L <sub>2</sub> +L=PdCl <sub>1</sub> L <sub>3</sub> +Cl)=2.8 K(PdCl <sub>1</sub> L <sub>3</sub> +L=PdL <sub>4</sub> +Cl)=1.30		

Medium: LiClO<sub>4</sub>. Data also for complexes with Br in place of Cl: 2.75, 5.75, 7.45, 8.25. Data for L=Br : 1.55, 2.64, 4.14

Pd++	sol	NaClO <sub>4</sub>	20°C	0.10M	U		K1=10.0	1967GGa	(8322) 89
Pd++	ISE	oth/un	25°C	1.0M	U			1965FKa	(8323) 90
							B4=24		
Pd++	sp	NaClO <sub>4</sub>	20°C	0.80M	U		K1=4.95 K4=2.92 B4=15.74	1965SLd	(8324) 91
Pd++	ISE	oth/un	19°C	var	U			1963GKa	(8325) 92
							B4=24.9		
Pd++	sol	oth/un	18°C	var	U			1948TAb	(8326) 93
							K(PdL <sub>2</sub> (s)+2I=PdL <sub>4</sub> )=-2.8		

\*\*\*\*\*  
NH<sub>3</sub> L Ammonia CAS 7664-41-7 (414)  
Ammonia

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	oth/un	25°C	1.0M	U	H		K1=9.56 K3=7.52	1991NSb	(9192) 94
Pd++	gl	KNO <sub>3</sub>	25°C	?	M	M	K1=6.06 K(PdA+L)=5.36	1988SKa	(9193) 95	

Medium: H/NH<sub>3</sub>/NaClO<sub>4</sub>;

A=diethylenetriamine

Pd++ gl NaClO<sub>4</sub> 21°C 0.10M C M 1984KMe (9194) 96  
K(PdGlyGly+L)=6.50  
K(PdPheGly+L)=6.53

Data also for many other amines

Pd++ sp none 25°C 0.0 C 1975PJb (9195) 97  
K(Pd(phen)+L)=7.45  
K(Pd(phen)L+L)=6.3

Pd++ gl NaClO<sub>4</sub> 25°C 1.0M U K1=9.6 B2=18.50 1968RJa (9196) 98  
K3=7.5  
K4=6.8

Pd++ ISE oth/un 25°C 0.50M U 1965FKa (9197) 99  
B4=29.6  
K(Pd+2e=Pd(s))=33.4

Medium: L. Also B4 for 10-60 C but assuming same RT/F as at 25 C

\*\*\*\*\*

NO<sub>2</sub>- HL Nitrite CAS 7782-77-6 (635)  
Nitrite;

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

Pd++ ISE oth/un 25°C var U 1965FKa (9401) 100  
B4=21  
K(Pd+2e=Pd(s))=33.4

Medium: KL var. B4 values 10-60 C, but RT/F at value for 25 C

\*\*\*\*\*

OH- HL Hydroxide (57)  
Hydroxide;

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

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M C M 2002MSb (11918) 101  
\*K(PdA(H<sub>2</sub>O)<sub>2</sub>)=-5.54  
\*K(PdA(OH)H<sub>2</sub>O)=-15.01

K(2PdA(H<sub>2</sub>O)<sub>2</sub>)=Pd<sub>2</sub>A<sub>2</sub>(OH)<sub>2</sub>+2H)=-7.90. A is N,N'-dimethylethylenediamine.

Pd++ gl NaClO<sub>4</sub> 25°C 0.10M C 2001BPd (11919) 102  
\*K(Pd(dien)(H<sub>2</sub>O))=-7.16

K(2Pd(dien)(H<sub>2</sub>O))=Pd<sub>2</sub>(dien)<sub>2</sub>(OH)<sub>2</sub>)=-10.56.

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M C M 2001SHc (11920) 103  
\*K(Pd(bpy)(H<sub>2</sub>O)<sub>2</sub>)=-3.91  
\*K(Pd(bpy)(OH)H<sub>2</sub>O)=-8.09

K(2Pd(bpy))=Pd<sub>2</sub>H-2(bpy)<sub>2</sub> =-4.70

Pd++ sol NaClO<sub>4</sub> 25°C 0.50M C TI K1=11.95 B2=23.20 1999VWa (11921) 104

At I=1.0, B2=23.4, B3=26.2. At I=0.1, B2=23.8. Data for 25-85 C.

Pd++ sp NaClO<sub>4</sub> 25°C 1.0M C 1998SEb (11922) 105  
 \*K(Pt(H<sub>2</sub>O)<sub>4</sub>)=-3.0

Pd++ g1 NaClO4 37°C 0.15M C M 1996GTa (11923) 106  
 $*K(PdA(H2O)2)=-5.25$   
 $*K(\text{dimer})=-6.55$

**A=diaminosuccinate diethylester, Eto2CCH(NH2).CH(NH2)CO2Et**  
 $\text{*K: PdA(H}_2\text{O)}_2=\text{PdA(H}_2\text{O)(OH)}_L+\text{H, } \text{*K(dimer): 2PdA(H}_2\text{O)}_2=(\text{PdA(H}_2\text{O)}_2(\text{OH})_2)_2+2\text{H}$

Pd++ sol oth/un 25°C var M B2=18.9 1991WOa (11924) 107  
B3=20.9

Data for 0.5-3.0 M NaCl. At I=1.0 M, \*K1=-9.30, \*B(4,4)=-29.10

Pd++ sol NaClO<sub>4</sub> 17°C 0.10M U K1=11.72 B2=23.57 1970NKb (11926) 109  
K3=1.85  
K4=1.0  
K<sub>so</sub>(Pd(OH)<sub>2</sub>(s))=-28.96

Pd++ sp none 25°C 0.0 M K1=12.4 B2=26.5 1967IEa (11927) 110  
 By glass electrode: K1=13.0, B2=25.8. By solubility:  $K_s(PdL_2(s)) = PdL_2 = -2.65$

Pd++ sp oth/un 25°C var U 1966WYa (11928) 111  
 \*K1(PdCl<sub>2</sub>(H<sub>2</sub>O)<sub>2</sub>)=-2

\*Kso: K(Pd(OH)2(s)+2H=Pd2+2H2O); \*Kso(PdO(s)+2H=Pd2+H2O); method: combination of thermodynamic data

Pd++      oth none    25°C    0.0    U      1952Lab (11930) 113  
 $K_{\text{SO}}(\text{Pd}(\text{OH})_2) = -31$

P04--- H3L Phosphate CAS 7664-38-2 (176)  
Phosphate:

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

Pd++ g1 KN03 25°C ? M M K1=3.10 1988SKa (13301) 114  
K(PdA+L)=2.63

A=diethylenetriamine

\*\*\*\*\*  
S-- H2L Sulfide CAS 7783-06-4 (705)  
Sulfide



Pd++      sol oth/un 20°C var U      1964GPa (15227) 123  
 $K_s(PdI_2(s)+L=PdL_2L)=-0.47$   
 -----
 Pd++      ISE oth/un 19°C var U      1963GKa (15228) 124  
 $B_4=27.6$   
 $K(Pd+2e=Pd(s))=33.4$   
\*\*\*\*\*  
 SO3--      H2L      Sulfite      CAS 7782-99-2 (801)  
 Sulfite;  
 -----
 Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo  
 -----
 Pd++      con oth/un ? var U      1960EAa (15474) 125  
 $K(PdL_2(OH)(H_2O)+H)=9$   
\*\*\*\*\*  
 SO4--      H2L      Sulfate      CAS 7664-93-9 (15)  
 Sulfate;  
 -----
 Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo  
 -----
 Pd++      sp NaClO4 25°C 1.0M C      1998SEb (16469) 126  
 $K(Pd+SO_4)=1.28$   
 $K(Pd+HSO_4)=-0.15$   
 $K(PdSO_4+H)=-0.40$   
 -----
 Pd++      vlt NaClO4 25°C 0.20M U      B2=3.16      1971JPa (16470) 127  
 Medium: HClO4  
\*\*\*\*\*  
 Se--      H2L      Selenide      (6335)  
 Selenide;  
 -----
 Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo  
 -----
 Pd++      oth none 25°C 0.0 U      1964BUe (16947) 128  
 $K_{so}=-73.4$   
\*\*\*\*\*  
 CH2O2      HL      Formic acid      CAS 64-18-6 (37)  
 Methanoic acid; H.COOH  
 -----
 Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo  
 -----
 Pd++      kin NaClO4 25°C 1.00M U H      K1=3.67      1997SEa (17639) 129  
 $K(Pd+HL=PdL+H)=0.15$   
 $DH(Pd+HL=PdL+H)=-9.7 \text{ kJ mol}^{-1}, DS(Pd+HL=PdL+H)=-29 \text{ J K}^{-1} \text{ mol}^{-1}$   
 -----
 Pd++      g1 KN03 25°C ? M M      K1=2.22      1988SKa (17640) 130  
 $K(PdA+L)=2.14$   
 A=diethylenetriamine  
\*\*\*\*\*  
 CH4N2O      L      Urea      CAS 57-13-6 (2018)

Carbamide, Urea; (H2N)2CO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	nmr	oth/un	40°C	0.90M	U				1998KKf (17723)	131

$$K(Pt(H_2O)_2en+L)=0.11$$

Method:  $^{13}C$  nmr. K is for N-bound ligand. For O-bound urea, K=1.36.  
Also data for many other alcohol/ $H_2O$  mixtures.

\*\*\*\*\*

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

Thiocarbamide, Thiourea; (H2N)2CS

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	?	1.0M	U	M			1966SBb (17848)	132

$$\begin{aligned} K(PdCl_2L_2+L=PdCl_1L_3+Cl) &= 4.86 \\ K(PdBr_2L_2+L=PdBr_1L_3+Br) &= 4.65 \\ K(PdCl_1L_3+L=PdL_4+Cl) &= 4.24 \\ K(PdBr_1L_3+L=PdL_4+Br) &= 4.18 \end{aligned}$$

$K(Pd(SCN)_2L_2+L=Pd(SCN)L_3+SCN)=2.95$ ;  $K(Pd(SCN)L_3+L=PdL_4+SCN)=2.52$ . I=1 or 0.2

\*\*\*\*\*

CH5N L Methylamine CAS 74-89-5 (155)

Methylamine; CH3.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO3	25°C	0.10M	C	M			2002MSb (18023)	133

$$\begin{aligned} K(PdA+L) &= 7.64 \\ K(PdA+2L) &= 13.46 \\ K(PdA+B+L) &= 16.57 \end{aligned}$$

A is N,N'-dimethylethylenediamine, B is 1,1-cyclobutane dicarboxylic acid.

Pd++	gl	NaNO3	25°C	0.10M	U	M			1999SSd (18024)	134
------	----	-------	------	-------	---	---	--	--	-----------------	-----

$$\begin{aligned} K(Pd(pn)+L) &= 6.96 \\ K(Pd(pn)+2L) &= 13.57 \end{aligned}$$

pn is 1,2-diaminopropane. For amine protonation, K1=10.43.

Pd++	gl	KN03	25°C	0.10M	M	M	K1=7.56		1991SKe (18025)	135
------	----	------	------	-------	---	---	---------	--	-----------------	-----

$$K(Pd(dien)+L)=4.86$$

Also data for complexes with homologous alkylamines.

Pd++	gl	NaClO4	21°C	0.10M	C	M			1984KMe (18026)	136
------	----	--------	------	-------	---	---	--	--	-----------------	-----

$$\begin{aligned} K(PdGlyGly+L) &= 7.18 \\ K(PdPheGly+L) &= 7.31 \end{aligned}$$

Data also for many other amines

CH6NO3P	H2L	AMPA							CAS 1066-51-3 (1981)	
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Aminomethylphosphonic acid; H2N.CH2.PO3H2

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

Pd++ gl KN03 25°C 0.10M C B2=27.51 1997BLc (18228) 137  
B(PdH2L2C12)=38.76  
B(PdHL2C12)=35.68  
B(PdHLC12)=24.65  
B(PdLC12)=21.08

B(PdH-2L)=4.73

Pd++ gl KCl 25°C 0.10M U 1996BRa (18229) 138  
K(Pd+L+C1)=21.52  
K(Pd+2L)=27.70  
K(Pd+L+H+2C1)=24.66

\*\*\*\*\*

C2H2O4 H2L Oxalic acid CAS 144-62-7 (24)  
Ethanedioic acid; (COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	ix	NaClO4	18°C	0.20M	U			K1=8.72	1972NKb (19031)	139
Medium :	HC1O4									
Pd++	oth	oth/un	18°C	?	U			K2=3.55	1972NKb (19032)	140
Method :	ion-migration									

C2H2S4 H2L CAS 82766-65-2 (2965)  
Tetrathio-oxalic acid; HSSC.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	?	0.05M	U				1957JBa (19170)	141
								B(Pd2L)=8.11		

C2H3N L Cyanomethane CAS 75-05-8 (1399)  
Acetonitrile; CH3.CN

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	M			1994PAa (19192)	142
Medium:	MeOH.	A=Bis(diphenylphosphino)methane						K(Pd3A3CO+L)=-1.0		

Pd++ sp NaClO4 25°C 1.00M C T H K1=15.5 B2=17.70 1988HEa (19193) 143  
Medium: HC1O4. DH(K1)=-8.6 kJ mol-1. DS(K1)=-6 J K-1 mol-1. At 5  
C, K1=19.6, K2=1.94; at 15 C, K1=16.7, K2=1.67

\*\*\*\*\*

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
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Pd++ sp KCl ? 1.00M U 1973RRc (19244) 144  
B4=32.4

Medium: HCl

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sol oth/un 25°C 2.00M U M 19720La (19428) 145  
K(PdCl3+L)=4.79  
K(PdBr3+L)=3.64  
K(PdI3+L)=1.68  
K(Pd(SCN)3+L)=2.00

Medium : MgSO4 K(Pd(NO2)3+L)=1.34

Pd++ sol NaClO4 13°C 2.0M U I 1966PMb (19429) 146  
K(PdCl4+L=PdCl3L+Cl)=1.19  
K(PdCl3L=PdCl2(H2O)L+Cl)=-1.5

Medium:HC1O4. K(PdCl4+L=PdCl2(H2O)L+2Cl)=-0.7. I=3.0: K values: 1.2, -0.7, 0.4. I=4.5(LiClO4+HClO4): K values: 1.21, -0.4, 0.81

\*\*\*\*\*

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sp NaClO4 25°C 1.00M U K1=4.34 1996SEa (20127) 147  
-----  
Pd++ sp alc/w 25°C 100% U M 1994PAa (20128) 148  
K(Pd3A3CO+L)=2.86

Medium: MeOH. A=Bis(diphenylphosphino)methane

Pd++ gl KNO3 25°C ? M M K1=2.73 1988SKa (20129) 149  
K(PdA+L)=2.52

A=diethylenetriamine

Pd++ sp NaClO4 25°C 0.92M U K1=4.9 B2=8.0 1976YBa (20130) 150  
K3=2.6

Pd++ sp non-aq 25°C 100% U M 19720Ma (20131) 151  
K(PdL2+CeL3=CePdL5)=4.8

Medium: CH3COOH

\*\*\*\*\*

C2H4O2S H2L Thioglycolic CAS 68-11-1 (596)  
Mercaptoethanoic acid; HS.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl NaClO4 25°C 1.00M C B2=47.5 2000SAb (20356) 152

$$K(Pd+HL)=22.2$$

$$K(Pd+2HL)=37.1$$

\*\*\*\*\*

C2H4O3 HL Glycolic acid CAS 79-14-1 (33)  
2-Hydroxyethanoic acid; HO.CH2.COOH

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

Pd++ sp NaClO<sub>4</sub> 25°C 1.00M U K1=3.81 1996SEa (20608) 153

\*\*\*\*\*

C2H5NO L Acetamide CAS 60-35-5 (2886)  
Ethanoic acid amide; CH<sub>3</sub>.CO.NH<sub>2</sub>

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

Pd++ sp oth/un 25°C .001M U K1=4.46 1958MCa (20673) 154

\*\*\*\*\*

C2H5NO<sub>2</sub> HL Glycine CAS 56-40-6 (85)  
2-Aminoethanoic acid; H<sub>2</sub>N.CH<sub>2</sub>.COOH

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

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M U M 1999SSd (21677) 155

$$K(Pd(pn)+L)=11.01$$

pn is 1,2-diaminopropane. For aminoacid protonation, K1=9.60, B2=11.93.

Pd++ gl NaNO<sub>3</sub> 37°C 0.16M M M 1998ESa (21678) 156

$$K(PdA+L)=10.76$$

A is 1,3-diaminopropane.

Pd++ gl KN<sub>3</sub> 25°C 0.50M U 1978LIa (21679) 157

$$K(Pd(en)+L)=11.21$$

Pd++ gl NaClO<sub>4</sub> 20°C 1.00M C K1=15.25 B2=27.50 1976AMa (21680) 158  
K(PdL+2Br)=6.47

Pd++ gl oth/un 25°C 0.01M U K1=9.12 B2=17.55 1949MMa (21681) 159

\*\*\*\*\*

C2H6N<sub>2</sub>O L Glycinamide CAS 598-41-4 (60)  
2-Aminoethanoic acid amide; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH<sub>2</sub>

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

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M U M 1999SSd (21951) 160

$$K(Pd(pn)+L)=8.58$$

$$K(Pd(pn)+L=PdH-1(pn)L+H)=5.35$$

pn is 1,2-diaminopropane. For amine protonation, K1=7.88.

Pd++ gl NaNO<sub>3</sub> 37°C 0.16M M M 1998ESa (21952) 161

$$K(PdA+L)=7.41$$

$$K(PdA+L=PdAH-1L+H)=4.20$$

A is 1,3-diaminopropane.

Pd++	gl	KNO <sub>3</sub>	25°C	0.10M	U	M	1977LIb (21953) 162
							$K(Pd(en)+L)=8.64$
							$K(Pd(en)L=PdH-1(en)L+H)=-2.47$

---

C<sub>2</sub>H<sub>6</sub>O<sub>5</sub> L DMSO CAS 67-68-5 (329)  
Dimethylsulfoxide; (CH<sub>3</sub>)<sub>2</sub>SO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	25°C	?	U	T	H	$K1=0.954$ $B2=0.56$	1987DMa (22117) 163	
								$DH(K1)=-7.3 \text{ kJ mol}^{-1}$ ; $DS(K1)=-8.4 \text{ J K}^{-1} \text{ mol}^{-1}$		

---

Pd++	sp	alc/w	25°C	95%	U	I	1982CCa (22118) 164
							$K(PdCl_4+L=PdLCl_3+Cl)=1.8$
							$K(PdLCl_3+L=PdL_2Cl_2+Cl)=-1.6$

Medium: 95% MeOH/H<sub>2</sub>O

---

C<sub>2</sub>H<sub>7</sub>N<sub>0</sub> L Ethanolamine CAS 141-43-5 (1057)  
2-Aminoethanol; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M			1999SSd (22415) 165	
								$K(Pd(pn)+L)=7.30$		
								$K(Pd(pn)+L=PdH-1(pn)L+H)=1.94$		
pn is 1,2-diaminopropane. For amine protonation, $K1=9.31$ .										
Pd++	gl	NaNO <sub>3</sub>	37°C	0.16M	M	M			1998ESa (22416) 166	
								$K(PdA+L)=6.81$		
								$K(PdA+L=PdAH-1L+H)=1.85$		

A is 1,3-diaminopropane.

Pd++	gl	KNO <sub>3</sub>	25°C	0.10M	M	M	1991SKe (22417) 167
							$K(Pd(dien)+L)=5.29$
Pd++	gl	KNO <sub>3</sub>	25°C	0.10M	U	M	1981LIb (22418) 168

$$K(Pd(H_2O)_2A+L=PdLA+2H_2O)=7.88$$

$$K(Pd(H-1L)A+H)=5.16$$

A=1,2-diaminoethane

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C<sub>2</sub>H<sub>8</sub>N<sub>2</sub> L Ethylenediamine CAS 107-15-7 (23)  
1,2-Diaminoethane; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.NH<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	M			2001NSa (23218) 169	
								$*B2(PdL(H_2O)_2)=-15.21$		

$K(2PdL(H_2O)_2=Pd_2(OH)_2L_2+H)=-3.04$ ,  $K(2PdL(H_2O)_2=Pd_2(OH)_2L_2+2H)=-8.41$ ,  
 $K(3PdL(H_2O)_2=Pd_3(OH)_3L_3+3H)=-11.80$

---

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M C M 2001SHc (23219) 170  
 $K(Pd(bpy)(H_2O)_2+L)=17.08$   
 $K(Pd(bpy)(H_2O)_2+H+L)=20.87$

---

Pd++ gl KN03 25°C 0.10M M M 1991SKe (23220) 171  
 $K(Pd(dien)+L)=6.70$   
 $K(Pd(dien)+H+L)=14.63$

---

Pd++ gl NaClO<sub>4</sub> 25°C 1.00M C M K1=23.6 B2=42.20 1986ANa (23221) 172  
Ternary complex with Br-. Combined pot. and spectrophotometric study

---

Pd++ gl KN03 23°C 0.20M U 1976LMa (23222) 173  
 $K(2PdL(OH)_2=LPd(OH)2PdL)=8.3$

---

C2H8O7P2 H4L HEDPA CAS 2809-21-4 (436)  
1-Hydroxyethane-1,1-diphosphonic acid; CH<sub>3</sub>.C(OH)(PO<sub>3</sub>H<sub>2</sub>)<sub>2</sub>

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++	gl	KN03	25°C	0.10M	U		K1=5.74 K(Pd+HL)=4.44 K(Pd+H2L)=2.41		1980ZRc (23394)	174
------	----	------	------	-------	---	--	--	--	-----------------	-----

---

C3H4N2 L Imidazole CAS 288-32-4 (90)  
1,3-Diazole, imidazole; C3H4N2

---

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

---

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M	K(PdA+L)=7.92 K(PdA+2L)=14.64 K(PdA+B+L)=14.20		2002MSb (23917)	175
------	----	-------------------	------	-------	---	---	--	--	-----------------	-----

---

A is N,N'-dimethylethylenediamine, B is 1,1-cyclobutane dicarboxylic acid.

---

Pd++	gl	NaNO <sub>3</sub>	37°C	0.16M	M	M	K(PdA+L)=7.29 K(PdA+2L)=13.87		1998ESa (23918)	176
------	----	-------------------	------	-------	---	---	----------------------------------	--	-----------------	-----

---

A is 1,3-diaminopropane.

---

Pd++	gl	KN03	25°C	?	M	M	K1=6.40 K(PdA+L)=5.62		1988SKa (23919)	177
------	----	------	------	---	---	---	--------------------------	--	-----------------	-----

---

A=diethylenetriamine

---

C3H4O4 H2L Malonic acid CAS 141-82-2 (79)  
Propanedioic acid; CH<sub>2</sub>(COOH)<sub>2</sub>

---

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

Pd++	gl	NaClO4	37°C	0.15M	C	M		2003TMB (24533) 178
							K(Pd(en)+L)=5.40	
Pd++	kin	NaClO4	25°C	1.00M	U	H	K1=3.40	1997SEa (24534) 179
							K(Pd+HL=PdL+H)=0.8	
DH(Pd+HL=PdL+H)=-7.5 kJ mol-1, DS(Pd+HL=PdL+H)=-10 J K-1 mol-1								
*****								
C3H6	L	Propylene			CAS	115-07-1	(702)	
Propene; CH3.CH:CH2								
-----								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
-----								
Pd++	sol	oth/un	25°C	2.00M	U	M		19720La (24755) 180
							K(PdCl3+L)=4.97	
							K(PdBr3+L)=3.72	
							K(Pd(NO2)3+L)=1.39	
							K(PdI3+L)=1.70	
Medium: MgSO4								
*****								
C3H6O2	HL	Propionic acid		CAS	79-09-4	(35)		
Propanoic acid; CH3.CH2.COOH								
-----								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
-----								
Pd++	sp	NaClO4	25°C	1.00M	U		K1=4.32	1996SEa (25040) 181
-----								
Pd++	sp	alc/w	25°C	100%	U	M		1994PAa (25041) 182
							K(Pd3A3CO+L)=3.41	
Medium: MeOH. A=Bis(diphenylphosphino)methane								
-----								
Pd++	gl	KNO3	25°C	?	M	M	K1=2.94 K(PdA+L)=2.60	1988SKa (25042) 183
A=diethylenetriamine								
*****								
C3H6O2S	HL			CAS	2444-37-3	(1074)		
(Methylthio)ethanoic acid; CH3.S.CH2.COOH								
-----								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
-----								
Pd++	gl	NaClO4	25°C	1.00M	C		K1=13.2 B2=22.30	2000SAB (25092) 184
-----								
Pd++	kin	oth/un	25°C	1.00M	U			1996SEa (25093) 185
							K1eff=4.08	
Medium: 1.00 M HClO4.								
*****								
C3H6O3	HL	L-Lactic acid		CAS	79-33-4	(82)		
L-2-Hydroxypropanoic acid; CH3.CH(OH).COOH								
-----								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo

Pd++ kin NaClO<sub>4</sub> 25°C 1.00M U H K1=3.79 1997SEa (25515) 186  
 K(Pd+HL=PdL+H)=1.42  
 DH(Pd+HL=PdL+H)=-6.6 kJ mol<sup>-1</sup>, DS(Pd+HL=PdL+H)=-18 J K<sup>-1</sup> mol<sup>-1</sup>  
 Pd++ gl KNO<sub>3</sub> 25°C ? M M K1=2.02 1988SKa (25516) 187  
 K(PdA+L)=1.89

A=diethylenetriamine

\*\*\*\*\*
 C3H6O<sub>3</sub> HL Methoxyacetic CAS 625-45-6 (29)  
 Methoxyethanoic acid; CH<sub>3</sub>.O.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO <sub>4</sub>	25°C	1.00M	U	H		K1=3.60	1997SEa (25605)	188
								K(Pd+HL=PdL+H)=1.60		

DH(Pd+HL=PdL+H)=-6.8 kJ mol<sup>-1</sup>, DS(Pd+HL=PdL+H)=-18 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*
 C3H<sub>7</sub>NO HL CAS 127-06-0 (7906)  
 Acetoxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	non-aq	40°C	100%	C	I	M		2001KKa (25641)	189
								K(cis-Pd(en)(S)2+L)=2.51		
								K(cis-Pd(en)L(S)+L)=1.52		
								K(cis-Pd(A)(S)2+L)=1.59		
								K(cis-Pd(A)L(S)+L)=0.48		

Medium: acetone (S). Also data for D2O/acetone mixtures.

Additional methods: <sup>1</sup>H and <sup>13</sup>C nmr. A is 3,6-dithia-1,8-octanediol.

\*\*\*\*\*
 C3H<sub>7</sub>NO L DMF CAS 68-12-2 (598)  
 N,N-Dimethylformamide; HCO.N(CH<sub>3</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	I	M		1994PAa (25666)	190
								K(Pd3A3CO+L)=-0.27		

Medium: MeOH. A=Bis(diphenylphosphino)methane. In toluene, K=-0.15;  
 in CH<sub>3</sub>CN, K=-0.35; in acetone, K=-0.62; in CH<sub>2</sub>Cl<sub>2</sub>, K=-0.59

\*\*\*\*\*
 C3H<sub>7</sub>NO<sub>2</sub> HL Alanine CAS 56-41-7 (86)  
 2-Aminopropanoic acid; H<sub>2</sub>N.CH(CH<sub>3</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M			1999SSd (26239)	191
								K(Pd(pn)+L)=11.42		

pn is 1,2-diaminopropane. For aminoacid protonation, K1=9.69, B2=11.88.

Pd++ gl NaNO<sub>3</sub> 37°C 0.16M M M 1998ESa (26240) 192  
K(PdA+L)=10.90

A is 1,3-diaminopropane.

Pd++ gl KN03 25°C 0.50M U 1978LIa (26241) 193  
K(Pd(en)+L)=11.22

Pd++ gl KN03 20°C 0.5M U K1=9.98 B2=18.33 1974KhB (26242) 194  
\*\*\*\*\*

C3H7N02 HL B-Alanine CAS 107-95-9 (575)  
3-Aminopropanoic acid; H2N.CH2.CH2.COOH

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

Pd++ gl KN03 20°C 0.5M U T K1=8.73 B2=15.79 1974KhB (26473) 195  
\*\*\*\*\*

C3H7N02 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

Pd++ gl KN03 25°C 0.50M U 1978LIa (26606) 196  
K(Pd(en)+L)=11.28

C3H7N02S H2L Cysteine CAS 52-90-4 (96)  
2-Amino-3-mercaptopropanoic acid; H2N.CH(CH2.SH)COOH

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

Pd++ gl NaClO<sub>4</sub> 25°C 1.00M C B2=51.6 2000SAb (26822) 197  
K(Pd+HL)=27.3  
K(Pd+2HL)=45.0

C3H7N03 HL Serine CAS 56-45-1 (49)  
2-Amino-3-hydroxypropanoic acid; H2N.CH(CH2.OH)COOH

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

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M U M 1999SSd (27167) 198  
K(Pd(pn)+L)=12.00  
K(Pd(pn)+L=PdH-1(pn)L+H)=3.74

pn is 1,2-diaminopropane. For aminoacid protonation, K1=9.14, B2=11.40.

Pd++ gl NaNO<sub>3</sub> 37°C 0.16M M M 1998ESa (27168) 199  
K(PdA+L)=10.19  
K(PdA+L=PdAH-1L+H)=1.90

A is 1,3-diaminopropane.

Pd++ gl KN03 25°C 0.10M U M T 1981LIb (27169) 200  
K(PdA(H2O)2+L=PdAL+2H2O)=11.01

$$K(PdA(H-1L)+H)=8.51$$

A=1,2-diaminoethane

\*\*\*\*\*

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

Pd++ EMF KN03 ? 1.00M U B2=21.1 1969S0a (27797) 201

Medium:HN03

\*\*\*\*\*

C3H9N2O4P H2L CAS 30211-73-5 (7117)

Glycylaminomethylphosphonic acid;

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

Pd++ gl KN03 25°C 0.10M C B2=26.27 1997BLc (27968) 202

B(PdH-2L2)=10.99

B(PdLC1)=20.54

B(PdH-1LC1)=16.74

B(PdH-2L)=8.67

B(PdH-3L)=-1.51

Pd++ gl KC1 25°C 0.10M U 1996BRa (27969) 203

K(Pd+L+2Cl+H)=24.48

K(Pd+2L)=27.50

K(Pd+L+Cl)=21.35

\*\*\*\*\*

C3H10N2 L CAS 78-90-0 (2905)

1,2-Diaminopropane; CH3.CH(NH2)CH2.NH2

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

Pd++ gl NaNO3 25°C 0.10M U 1999SSd (28170) 204

\*K(PdL)=-5.62

\*K(Pd(OH)L)=-9.35

\*\*\*\*\*

C3H10N2 L Propanediamine CAS 109-76-2 (123)

1,3-Diaminopropane; H2N.CH2.CH2.CH2.NH2

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

Pd++ gl NaNO3 37°C 0.16M M 1998ESa (28319) 205

\*K(PdL(H2O)2)=-5.45

\*B2(PdL(H2O)2)=-14.58

\*\*\*\*\*

C3H11N3 L CAS 21292-99-6 (2975)

Propane-1,2,3-triamine; H2N.CH2.CH(NH2).CH2.NH2

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

Pd++      gl    NaNO<sub>3</sub>    25°C    0.10M    C      M      1996SEb (28490) 207  
 $K(PdL+cysteine)=5.79$   
 $K(PdL+H+cysteine)=14.45$   
 $K(PdL+penicillamine)=6.05$   
 $K(PdL+H+penicillamine)=14.64$   
 $k(PdL+His)=8.52$ ,  $K(PdL+H+His)=15.63$ ,  $K(PdL+histamine)=8.85$ ,  $K(PdL+H+histamine)=15.34$ . Also  $K(PdL+A=PdL(H-1A))$  for A=Gly-Val (-4.43), Leu-Ala (-3.7)

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
Pd++	ISE	KNO <sub>3</sub>	20°C	0.10M	U	M			1969GKc (28694)	208
							B(PdCl <sub>2</sub> L <sub>2</sub> )=21.7			
							K(PdCl <sub>2</sub> L+L)=7.82			
*****										
C4H4N2O <sub>2</sub>	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
Pd++	g1	NaNO <sub>3</sub>	25°C	0.10M	C	M			2002MSb (28863)	209
								$K(PdA+L)=8.35$		
								$K(PdA+2L)=14.88$		
								$K(PdA+B+L)=16.18$		

A is N,N'-dimethylethylenediamine, B is 1,1-cyclobutanedicarboxylic acid.

---

Pd <sup>++</sup>	gl	NaNO <sub>3</sub>	25°C	0.10M C	M	2001SHc (28864) 210
						K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +L)=10.96
						K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +H+L)=13.50
						K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +2L)=17.17
						K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +2L+H)=22.15

Pd++ g1 NaNO<sub>3</sub> 25°C 0.10M U M 1999SSd (28865) 211  
 $K(Pd(pn)+L)=8.74$   
 $K(Pd(pn)+2L)=15.43$   
 pn is 1,2-diaminopropane. For nucleotide protonation, K1=9.12

---

Pd++      gl    NaNO<sub>3</sub>    37°C    0.16M    M    M      1998ESa (28866) 212  
 $K(PdA+L)=8.08$

$$K(PdA+2L)=13.92$$

A is 1,3-diaminopropane.

Pd++	gl	KNO <sub>3</sub>	25°C	0.10M	U	M	1981LIa (28867) 213
							$K(Pd(en)(H2O)2+L)=8.59$
							$K(Pd(en)(H2O)L+L)=6.79$
							$K(Pd(dien)(H2O)+L)=8.01$

\*\*\*\*\*  
C4H6N2S                   HL     Methimazole        CAS 60-56-0 (1824)  
N-Methyl-2-mercaptopimidazole; C3H2N2(CH<sub>3</sub>).SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	KNO <sub>3</sub>	25°C	0.50M	C			K1=7.43    B2=11.30	1977LWa (29666) 214	

\*\*\*\*\*  
C4H6O4                   H2L     Succinic acid      CAS 110-15-6 (112)  
1,4-Butanedioic acid; HOOC.CH<sub>2</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO <sub>4</sub>	25°C	1.00M	U	H		K1=4.03	1997SEa (30025) 215	

$DH(Pd+HL=PdL+H)=10 \text{ kJ mol}^{-1}$ ,  $DS(Pd+HL=PdL+H)=36 \text{ J K}^{-1} \text{ mol}^{-1}$

\*\*\*\*\*  
C4H6O4                   H2L     Me-Malonic Acid    CAS 516-15-2 (816)  
Methylpropanedioic acid; HOOC.CH(CH<sub>3</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO <sub>4</sub>	37°C	0.15M	C	M			2003TMb (30134) 216	

$K(Pd(en)+L)=5.68$

\*\*\*\*\*  
C4H6O5                   H2L     Malic acid        CAS 617-48-1 (393)  
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOC.CH<sub>2</sub>.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO <sub>4</sub>	25°C	1.00M	U	H		K1=3.65	1997SEa (30699) 217	

$K(Pd+HL=PdL+H)=0.54$

$DH(Pd+HL=PdL+H)=-3.5 \text{ kJ mol}^{-1}$ ,  $DS(Pd+HL=PdL+H)=-1 \text{ J K}^{-1} \text{ mol}^{-1}$

\*\*\*\*\*  
C4H6O5                   H2L     Diglycolic acid    CAS 110-99-6 (243)  
Di(carboxy)methyl ether, 2,2'-Oxydiethanoic acid; HOOC.CH<sub>2</sub>O.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO <sub>4</sub>	25°C	1.00M	U	H		K1=3.46	1997SEa (30914) 218	

$K(Pd+HL=PdL+H)=0.64$

$DH(Pd+HL=PdL+H)=-12 \text{ kJ mol}^{-1}$ ,  $DS(Pd+HL=PdL+H)=-27 \text{ J K}^{-1} \text{ mol}^{-1}$

\*\*\*\*\*

C4H7N04 H2L Aspartic acid CAS 56-84-8 (21)  
 Aminobutanedioic acid; H2N.CH(CH<sub>2</sub>.COOH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaCl	37°C	0.10M	C				2003GZa (31919)	219
								B(Pd(bpy)L)=13.91		
Pd++	gl	none	25°C	0.0	U				1979FWa (31920)	220
								K(PdL2+H)=4.52		
								K(PdHL2+H)=3.68		
								K(PdCl <sub>4</sub> +2HL=PdH <sub>2</sub> L <sub>2</sub> +4Cl)=11.3		
Pd++	gl	NaClO <sub>4</sub>	25°C	0.10M	U			K1=10.44 B2=18.14	1972SSe (31921)	221
Pd++	gl	KNO <sub>3</sub>	30°C	0.10M	U			K1=10.55 B2=18.25	1971STc (31922)	222
Pd++	oth	KNO <sub>3</sub>	30°C	0.13M	U				1971TKe (31923)	223
								K(Pd+H <sub>2</sub> L=PdHL+H)=10.45		
								K(PdHL+H <sub>2</sub> L=Pd(HL)2+H)=7.76		

\*\*\*\*\*

C4H7N04 H2L IDA CAS 142-73-4 (118)  
 Iminodiethanoic acid; HN(CH<sub>2</sub>.COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO <sub>4</sub>	20°C	1.00M	C	M		K1=17.5 B2=26.80	1976AMa (32336)	224
								K(Pd+HL)=9.0		
								K(PdL+2Br)=3.83		

Pd++	gl	KCl	25°C	0.1M	U			K1=9.62 B2=14.87	1975CGc (32337)	225
Pd++	EMF	KCl	25°C	0.10M	U			K1=9.62 B2=14.87	1975VCa (32338)	226

\*\*\*\*\*

C4H8 L But-1-ene CAS 106-98-9 (2985)  
 But-1-ene; CH<sub>2</sub>:CH.CH<sub>2</sub>.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sol	NaClO <sub>4</sub>	15°C	5.0M	U	I M			1966PMb (32458)	227

K(PdCl<sub>4</sub>+L=PdCl<sub>3</sub>L+C<sub>1</sub>)=1.05

Medium: LiClO<sub>4</sub>+HClO<sub>4</sub>. K=1.14(I=2), 1.13(I=3), 1.13(I=4)

K(PdCl<sub>4</sub>+L=PdCl<sub>2</sub>(H<sub>2</sub>O)L+2C<sub>1</sub>)=-0.5(I=2), 0.1(I=3), 0.65(I=4), 0.95(I=5)

\*\*\*\*\*

C4H8N2O2 H2L Dimethylglyoxim CAS 95-45-4 (2032)  
 2,3-Butanedione dioxime, Dimethylglyoxime; CH<sub>3</sub>.(C:NOH).(C:NOH).CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	dis	NaClO <sub>4</sub>	25°C	1.0M	U			B2=34.1	1963BDa (32547)	228

$$K(PdL_2+OH)=5.50$$

Pd++ sol oth/un 25°C ? U 1958BBb (32548) 229

$$K_{s2}=-3.30$$

\*\*\*\*\*

C4H8N2O3 HL Asparagine CAS 70-47-3 (17)

2-Aminobutanedioic acid 4-amide; H2N.CH(CH2.CO.NH2).COOH

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

Pd++ gl NaNO3 25°C 0.10M U M 1999SSd (32720) 230

$$K(Pd(pn)+L)=12.79$$

$$K(Pd(pn)+L=PdH-1(pn)L+H)=6.38$$

pn is 1,2-diaminopropane. For amide protonation,  $K_1=8.55$ .

Pd++ gl NaNO3 37°C 0.16M M M 1998ESa (32721) 231

$$K(PdA+L)=10.19$$

$$K(PdAH-1L+H)=3.33$$

A is 1,3-diaminopropane.

Pd++ gl KNO3 25°C 0.50M U M 1977LIa (32722) 232

$$K(Pd(en)+L)=10.46$$

$$K(Pd(en)H-1L+H)=6.46$$

Pd++ gl NaClO4 25°C 3.00M C 1974GWa (32723) 233

$$B(PdHL)=12.11$$

$$B(PdH-1L)=9.1$$

$$B(PdHLC1)=18.29$$

$$B(PdH-1LC1)=17.0$$

\*\*\*\*\*

C4H8N2O3 HL Gly-Gly CAS 556-50-3 (54)

Glycyl-glycine; H2N.CH2.CO.NH.CH2.COOH

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

Pd++ gl KNO3 25°C 0.20M C 1999AJa (33047) 234

$$B(PdLC1)=18.08$$

$$B(PdH-1LC1)=15.56$$

$$B(PdH-2L)=4.89$$

$$B(PdH-1L2)=19.30$$

Medium: 0.1 M KNO3, 0.1 M KCl.  $B(PdH-2L2)=13.90$ ;  $B(PdH-1L)=13.57$ .

Pd++ gl NaNO3 25°C 0.10M U M 1999SSd (33048) 235

$$K(Pd(pn)+L)=9.41$$

$$K(Pd(pn)+L=PdH-1(pn)L+H)=6.02$$

pn is 1,2-diaminopropane. For aminoacid protonation,  $K_1=7.97$ .

Pd++ gl NaNO3 37°C 0.16M M M 1998ESa (33049) 236

$$K(PdA+L)=7.53$$

$$K(PdA+L=PdAH-1L+H)=2.88$$

A is 1,3-diaminopropane.

Pd++ gl KN03 25°C 0.10M U M 1977LIb (33050) 237  
K(Pd(en)+L)=9.60  
K(Pd(en)L=PdH-1(en)L+H)=-3.76

\*\*\*\*\*  
C4H8OS L (1882)  
Tetramethylenesulfoxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sp alc/w 25°C 95% U 1982CCa (33192) 238  
K(PdCl4+L=PdLC13+C1)=1.7

\*\*\*\*\*  
C4H8O2 HL CAS 107-92-6 (1118)  
n-Butanoic acid; CH3.CH2.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ kin NaClO4 25°C 1.00M U H K1=4.38 1997SEa (33346) 239  
K(Pd+HL=PdL+H)=-0.29

DH(Pd+HL=PdL+H)=-14.6 kJ mol-1, DS(Pd+HL=PdL+H)=-55 J K-1 mol-1  
\*\*\*\*\*

C4H8O3 HL CAS 594-61-6 (81)  
2-Hydroxy-2-methylpropanoic acid; (CH3)2C(OH).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ kin NaClO4 25°C 1.00M U H K1=4.05 1997SEa (33504) 240  
K(Pd+HL=PdL+H)=1.88

DH(Pd+HL=PdL+H)=-8.1 kJ mol-1, DS(Pd+HL=PdL+H)=-21 J K-1 mol-1  
\*\*\*\*\*

C4H9NO L CAS 127-19-5 (477)  
N,N-Dimethylacetamide; CH3.CO.N(CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sp alc/w 25°C 100% U M 1994PAa (33767) 241  
K(Pd3A3CO+L)=-1.15

Medium: MeOH. A=Bis(diphenylphosphino)methane  
\*\*\*\*\*

C4H9N02 L CAS 623-33-6 (3011)  
Glycine ethyl ester; H2N.CH2.CO.OCH2CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl KN03 25°C 0.20M M M K1=6.01 1987SKb (34002) 242  
K(Pd(dien)+L)=2.81

Pd++ gl KN03 25°C 0.50M U 1983LIb (34003) 243

$$K(Pd(en)+L)=7.12$$

\*\*\*\*\*

C4H9N02 HL Dimethylglycine CAS 1118-68-9 (88)  
N,N-Dimethyl-2-aminoethanoic acid; (CH<sub>3</sub>)<sub>2</sub>N.CH<sub>2</sub>.COOH

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

Pd++ gl KN03 25°C 0.50M U 1978LIa (34031) 244  
 $K(Pd(en)+L)=11.02$

\*\*\*\*\*

C4H9N02S HL Methylcysteine CAS 1187-84-4 (84)  
2-Amino-3-methylmercaptopropanoic acid; H2N.CH(CH<sub>2</sub>.S.CH<sub>3</sub>).COOH

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

Pd++ gl NaClO<sub>4</sub> 25°C 0.10M M 2002BSa (34101) 245  
 $*K(PdL)=-4.13$   
 $K(2PdL=Pd2H-1L2)=-0.01$   
 $*B2(PdL)=-15.77$

Pd++ gl NaClO<sub>4</sub> 25°C 1.00M C K1=19.9 B2=36.30 2000SAb (34102) 246

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M U M 1999SSd (34103) 247  
 $K(Pd(pn)+L)=10.83$

pn is 1,2-diaminopropane. For aminoacid protonation, K1=8.65.

Pd++ gl KN03 25°C 0.50M U 1978LIa (34104) 248  
 $K(Pd(en)+L)=9.38$   
 $K(Pd(en)+HL)=1.18$

\*\*\*\*\*

C4H9N03 HL Threonine CAS 72-19-5 (48)  
2-Amino-3-hydroxybutanoic acid; H2N.CH(CH(OH).CH<sub>3</sub>).COOH

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

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M U M 1999SSd (34319) 249  
 $K(Pd(pn)+L)=11.76$   
 $K(Pd(pn)+L=PdH-1(pn)L+H)=3.83$

pn is 1,2-diaminopropane. For aminoacid protonation, K1=9.06, B2=11.03.

Pd++ gl KN03 25°C 0.10M U M T 1981LIB (34320) 250  
 $K(PdA(H2O)2+L=PdAL+2H2O)=10.96$   
 $K(PdA(H-1L)+H)=8.05$

A=1,2-diaminoethane

\*\*\*\*\*

C4H9N03 HL Homoserine CAS 1927-25-9 (578)  
2-Amino-4-hydroxybutanoic acid; HO.CH<sub>2</sub>.CH<sub>2</sub>.CH(NH<sub>2</sub>).COOH

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

Pd++ gl KNO<sub>3</sub> 25°C 0.10M U M 1981LIb (34357) 251  
 $K(PdA(H_2O)_2+L=PdAL+2H_2O)=11.09$   
 $K(PdA(H-1L)+H)=9.60$

A=1,2-diaminoethane

\*\*\*\*\*

C4H<sub>9</sub>NS L CAS 123-90-0 (3777)

Thiomorpholine, tetrahydro-4H-1,4-thiazine, thiamorpholine;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	oth/un	25°C	1.00M	U				1996SEa (34405)	252
								K <sub>1eff</sub> =4.30		

Medium: 1.00 M HClO<sub>4</sub>.

\*\*\*\*\*

C4H<sub>10</sub>N<sub>2</sub> L CAS 56123-06-9 (8023)

1,3-Diamino-2-methylenepropane;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.50M	U			K <sub>1</sub> =13.64 B <sub>2</sub> =25.27	1975HSb (34490)	253
C4H <sub>10</sub> S		L						CAS 110-77-0 (3516)		
								Ethyl-2-hydroxyethyl sulfide, 2-(ethylthio)ethanol; CH <sub>3</sub> CH <sub>2</sub> SCH <sub>2</sub> CH <sub>2</sub> OH		
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	oth/un	25°C	1.00M	U				1996SEa (34661)	254
								K <sub>1eff</sub> =4.45		

Medium: 1.00 M HClO<sub>4</sub>.

\*\*\*\*\*

C4H<sub>10</sub>O<sub>2</sub>S L CAS 111-48-8 (4275)

3-Thiapentan-1,5-diol; HO.CH<sub>2</sub>.CH<sub>2</sub>.S.CH<sub>2</sub>.CH<sub>2</sub>OH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	oth/un	25°C	1.00M	U				1996SEa (34687)	255
								K <sub>1eff</sub> =4.34		

Medium: 1.00 M HClO<sub>4</sub>.

\*\*\*\*\*

C4H<sub>11</sub>N L Diethylamine CAS 109-89-7 (1331)

Diethylamine, 3-azapentane; (C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>NH

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	non-aq	25°C	100%	U				1994CAa (34820)	256
								K(PdAB+2L=PdAL <sub>2</sub> +B)=3.14		

A:C<sub>3</sub>H<sub>5</sub> (n(3)-allyl); B:N,N'-di(4-methoxyphenyl)-1,2-diaminoethane.

Additional data for other allyl and amino derivatives.

\*\*\*\*\*

C4H<sub>12</sub>N<sub>2</sub> L Dimeen CAS 110-70-3 (125)

N,N'-Dimethyl-1,2-diaminoethane; CH<sub>3</sub>.NH.CH<sub>2</sub>.CH<sub>2</sub>.NH.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C				2001MSb (35422)	257

$$\begin{aligned} *K(PdL(H_2O)_2) &= -5.54 \\ *K(PdL(OH)H_2O) &= -9.47 \\ K(2PdL=Pd_2H-2L_2+2H) &= -7.90 \end{aligned}$$

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M			2001MSb (35423)	258
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$$\begin{aligned} K(PdL+gly) &= 11.79 \\ K(PdL+ala) &= 10.89 \\ K(PdL+pro) &= 11.14 \\ K(PdL+val) &= 11.59 \end{aligned}$$

Also data for phe, met, imidazole, ser, his, histamine, orn, lys, asp and glu. Amino acid protonation constants also reported.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M			2001MSb (35424)	259
------	----	-------------------	------	-------	---	---	--	--	-----------------	-----

$$\begin{aligned} K(PdL+A) &= 16.31 \\ K(PdL+B) &= 15.12 \\ K(PdL+C) &= 16.31 \\ K(PdL+D) &= 7.64 \end{aligned}$$

K(PdL+E)=6.46. HA=mercaptoethylamine, H3B=glutathione, H2C=cysteine, D=methylamine, E=ethanolamine. Protonation constants also reported.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M			2001MSb (35425)	260
------	----	-------------------	------	-------	---	---	--	--	-----------------	-----

$$\begin{aligned} K(PdL+A) &= 6.38 \\ K(PdL+B) &= 6.28 \\ K(PdL+C) &= 4.35 \\ K(PdL+D) &= 4.09 \end{aligned}$$

Acids: H2A=oxalic, H2B=malonic, H2C=succinic, H2D=adipic. Also data for 1,1-cyclobutane dicarboxylic & fumaric. Protonation constants reported.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M			2001MSb (35426)	261
------	----	-------------------	------	-------	---	---	--	--	-----------------	-----

$$\begin{aligned} K(PdL+A) &= 8.70 \\ K(PdL+B) &= 8.35 \\ K(PdL+C) &= 8.56 \\ K(PdL+D) &= 8.75 \end{aligned}$$

HA=uridine, HB=uracil, HC=thymine, HD=thymidine. Also data for inosine, IMP and adenine. Protonation constants are reported.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M			2001MSb (35427)	262
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$$\begin{aligned} K(PdL+A) &= 7.40 \\ K(PdL+B) &= 10.73 \\ K(PdL+C) &= 12.31 \end{aligned}$$

A=glycinamide, HB=glutamine, HC=aspargine.  
Protonation constants are reported.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M			2001MSb (35428)	263
------	----	-------------------	------	-------	---	---	--	--	-----------------	-----

$$K(PdL+A) = 7.75$$

$$K(PdL+B)=7.63$$

$$K(PdL+C)=8.36$$

HA=glycylglycine, HB=glycylalanine, HC=glycylleucine.

Protonation constants are reported.

\*\*\*\*\*

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

Pd++ gl KN03 25°C ? M M 1988SKa (35805) 264

$$B(PdH-1L)=-8.68$$

$$B(PdL(Butyrate))=2.58$$

$$B(PdL(pyridine))=4.04$$

Pd++ gl NaClO4 25°C 1.00M C M K1=32.6 B2=40.40 1986ANa (35806) 265

Ternary complexes with Cl- and Br-. A combined pH-metric and spec. study.

Pd++ gl NaClO4 25°C 0.50M C I 1981GMF (35807) 266

$$*K(PdL)=-7.589$$

$$K(PdL+PdLOH=Pd2L2OH)=2.19$$

In 0.5 NaNO3: \*K(PdL)=-7.543, K(PdL+PdLOH)=2.10

Pd++ gl NaNO3 25°C 1.00M U M K1=34 1969RJa (35808) 267

$$K(PdL+NH3)=6.9$$

\*\*\*\*\*

C5H5N L Pyridine CAS 110-86-1 (31)

Pyridine, Azine;

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

Pd++ sp non-aq 25°C 100% U 1994CVa (36663) 268

$$K(PdAB+2L=PdAL2+B)=1.09$$

$$K(PdAC+2L=PdAL2+C)=-1.39$$

Medium: CHCl3. A:n3-allyl; B:4-MeOC6H4.N=CH.CH=N.C6H4OMe; C:4-MeOC6H4.N=C(Me).C(Me)=N.C6H4OMe. Also data for 4-substituted pyridines.

Pd++ sp NaClO4 25°C 1.0M U I M K1=8.4 B2=16.10 1986AHb (36664) 269

$$K3=6.6$$

$$K4=5.9$$

Ternary complexes with 2,2'-bipyridine and 1,10-phenanthroline.

In 0.1M NaCH3SO3, K1=8.5, K2=7.5, K3=6.3, K4=5.7.

Pd++ sp NaClO4 25°C 1.0M U M 1984ETa (36665) 270

$$K(Pd(en)C12+L=PdenLC1+C1)=4.31$$

$$K(Pd(en)LC1+L=PdenL2+C1)=3.15$$

Pd++ sp none 25°C 0.0 C 1975PJb (36666) 271

$$K(Pd(phen)+L)=7.02$$

$$K(Pd(phen)L+L)=6.18$$

\*\*\*\*\*

C5H5N5 L Adenine CAS 73-24-5 (237)  
6-Aminopurine; H2N.C5H3N4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO3	25°C	0.10M	C	M			2001SHc (36975)	272
								K(Pd(bpy)(H2O)2+L)=11.95		
								K(Pd(bpy)(H2O)2+H+L)=15.97		
								K(Pd(bpy)(H2O)2+2L)=16.59		
								K(Pd(bpy)(H2O)2+2L+H)=25.76		

$$K(Pd(bpy)(H2O)2+2L+2H)=30.25.$$

Pd++	gl	NaNO3	25°C	0.10M	U	M			1999SSd (36976)	273
								K(Pd(pn)+L)=11.14		

pn is 1,2-diaminopropane. For nucleotide protonation, K1=9.59, B2=13.77.

Pd++	gl	NaNO3	37°C	0.16M	M	M			1998ESa (36977)	274
								K(PdA+L)=10.83		
								K(PdA+2L)=14.62		

A is 1,3-diaminopropane.

\*\*\*\*\*

C5H6N2O2 HL 1-Methyluracil CAS 615-77-0 (7923)  
1-Methyl-2,4(1H,3H)-pyrimidinedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	0.20M	C	M			2003NFa (37222)	275
								K(PdA+L)=9.26		
Pd++	gl	KNO3	25°C	0.20M	C	M			2001NSa (37223)	276
								K(Pd(en)+L)=9.07		
								K(Pd(en)+2L)=14.88		
								*K(Pd(en)(H2O)L)=-8.53		

$$K(Pd(en)(H2O)+L=Pd(en)(OH)L+H)=0.54,$$

$$K(2Pd(en)(H2O)2+2L=Pd2(en)2(OH)L2+H)=12.58$$

Pd++	gl	KNO3	25°C	0.20M	C	M			2001NSa (37224)	277
								K(Pd(pic)+L)=9.57		
								K(Pd(pic)+2L)=15.73		
								*K(Pd(pic)(H2O)L)=-7.73		

$$K(Pd(pic)(H2O)+L=Pd(pic)(OH)L+H)=1.84,$$

$$K(2Pd(pic)(H2O)2+2L=Pd2(pic)2(OH)L2+H)=14.58. \text{ Hpic=picric acid.}$$

Pd++	gl	KNO3	25°C	0.20M	C		K1=7.51		2000NFa (37225)	278

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M			2002MSb (37282)	279
								K(PdA+L)=8.56 K(PdA+2L)=15.14 K(PdA+B+L)=15.71		
A is N,N'-dimethylethylenediamine, B is 1,1-cyclobutanedicarboxylic acid.										
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M			1999SSd (37283)	280
								K(Pd(pn)+L)=8.90 K(Pd(pn)+2L)=15.80		
pn is 1,2-diaminopropane. For nucleotide protonation, K1=9.59.										
Pd++	gl	NaNO <sub>3</sub>	37°C	0.16M	M	M			1998ESa (37284)	281
								K(PdA+L)=8.37 K(PdA+2L)=14.60		
A is 1,3-diaminopropane.										
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C				1997WKa (37285)	282
								K(PdACl+L=PdAL+C1)=6.97		
PdA is [PdH-1(gly-met)].										
*****										
C5H7N3O                            HL        1-MeCytosine            CAS 1122-47-0 (2268)										
1-Methyl-4-aminopyrimidin-2-one;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	M			2003NFa (37588)	283
								K(PdA+L)=5.84 K(2PdA+L=Pd2A2H-1L+H)=1.76		
A is bis-((2-pyridyl)methyl)amine										
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	M			2001NSa (37589)	284
								K(Pd(en)+L)=6.13 K(Pd(en)+2L)=11.44 *K(Pd(en)(H <sub>2</sub> O)L)=-5.69		
								K(Pd(en)(H <sub>2</sub> O)+L=Pd(en)(OH)L+H)=0.44, K(2Pd(en)(H <sub>2</sub> O)2+2L=Pd2(en)2(OH)L2+H)=10.41		
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	M			2001NSa (37590)	285
								K(Pd(pic)+L)=8.07 K(Pd(pic)+2L)=13.35 *K(Pd(pic)(H <sub>2</sub> O)L)=-5.22		
								K(Pd(pic)(H <sub>2</sub> O)+L=Pd(pic)(OH)L+H)=2.85, K(2Pd(pic)(H <sub>2</sub> O)2+2L=Pd2(pic)2(OH)L2+H)=14.06. Hpic=picric acid.		
Pd++	cal	KNO <sub>3</sub>	25°C	0.20M	C	HM			2000NFa (37591)	286
								DH(Pd(dien)+L)=-38.5 kJ mol <sup>-1</sup> ; DH(Pd(gly-ala)+L)=-33.1, DH(Pd(gly-met)+L)=-32.8.		

Pd++ gl KN03 25°C 0.20M C 1997WKa (37592) 287  
 $K(PdACl+L=PdAL+C1)=5.04$

PdA is [PdH-1(gly-Met)].

\*\*\*\*\*  
C5H8N2OS H2L (6682)

5,5-Dimethyl-2-thioxoimidazolidin-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaCl	25°C	0.10M	C		B2=22.96		1993CCa (37688)	288
							B(PdH2L2)=44.10			
							B(PdHL2)=34.58			
							B(Pd2HL2)=45.46			
							B(Pd2L2)=38.31			

$B(Pd2H-1L2)=28.34$

\*\*\*\*\*  
C5H8O2 HL Acetylacetone CAS 123-54-6 (164)  
Pentane-2,4-dione; CH3.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	oth/un	20°C	0.0	U T H		K1=16.7		1957DBa (38056)	289
DH(K1)=-75 kJ mol-1, DS=63.			30 C:	K1=16.2, K2=10.9;	40 C:	K1=15.4, K2=10.5				
Pd++	gl	diox/w	25°C	50%	U		K1=8.71	B2=16.84	1949MMa (38057)	290

\*\*\*\*\*  
C5H8O4 H2L CAS 595-46-0 (1144)  
Dimethylmalonic acid; HOOC.C(CH3)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO4	37°C	0.15M	C	M			2003TMB (38216)	291
								K(Pd(en)+L)=5.22		

\*\*\*\*\*  
C5H9NO2 HL Proline CAS 147-85-3 (44)  
Pyrrolidine-2-carboxylic acid; C4H8N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO3	25°C	0.10M	U	M			1999SSd (38634)	292
								K(Pd(pn)+L)=11.55		
pn is 1,2-diaminopropane. For aminoacid protonation, K1=10.52, B2=12.03.										
Pd++	gl	NaNO3	37°C	0.16M	M	M			1998ESa (38635)	293
								K(PdA+L)=10.48		

A is 1,3-diaminopropane.

Pd++	gl	KN03	25°C	0.50M	U				1978LIa (38636)	294
								K(Pd(en)+L)=12.16		

Pd++ gl KNO<sub>3</sub> 20°C 0.5M U K1=10.26 B2=19.10 1974Khb (38637) 295  
\*\*\*\*\*

C5H<sub>9</sub>N<sub>0</sub>3 HL Hydroxyproline CAS 51-35-4 (416)  
4-Hydroxy-2-pyrrolidinecarboxylic acid; C<sub>4</sub>H<sub>7</sub>N(OH)(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.10M	U	M			1981LIb (38746) 296	
								K(PdA(H <sub>2</sub> O) <sub>2</sub> +L=PdAL+2H <sub>2</sub> O)=11.47		
								K(PdA(H-1L)+H)=10.82		

A=1,2-diaminoethane

Pd++ gl KNO<sub>3</sub> 20°C 0.5M U K1=9.88 B2=19.45 1974Khb (38747) 297  
\*\*\*\*\*

C5H<sub>9</sub>N<sub>0</sub>4 H<sub>2</sub>L Glutamic acid CAS 56-86-0 (22)  
2-Aminopentanedioic acid; H<sub>2</sub>N.CH(CH<sub>2</sub>.CH<sub>2</sub>.COOH)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KCl	25°C	0.1M	U		B2=38.0		2004AEa (39116) 298	
							K(Pd+HL)=46.7			
							K(Pd+2H <sub>2</sub> L+2C <sub>1</sub> )=54.2			
							K(Pd+2L+OH)=30.1			
							K(Pd <sub>2</sub> d+L+2C <sub>1</sub> )=41.9			

Pd++	gl	none	25°C	0.0	U				1979FWa (39117) 299	
							K(PdL <sub>2</sub> +H)=4.76			
							K(PdHL <sub>2</sub> +H)=4.06			
							K(PdC <sub>1</sub> 4+2HL=PdH <sub>2</sub> L <sub>2</sub> +4C <sub>1</sub> )=10.0			

Pd++ gl NaClO<sub>4</sub> 25°C 0.10M U K1=10.38 B2=17.84 1972SSe (39118) 300  
\*\*\*\*\*

C5H<sub>9</sub>N<sub>0</sub>4 H<sub>2</sub>L MIDA CAS 4408-64-4 (190)  
N-Methyliminodethanoic acid; CH<sub>3</sub>.N(CH<sub>2</sub>.COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++	sp	KCl	20°C	0.10M	U		B2=24.88		1987KUa (39277) 301	

C5H<sub>9</sub>N<sub>0</sub>4S H<sub>2</sub>L (1736)  
3-(Carboxymethyl)thio-L-alanine; HOOC.CH<sub>2</sub>.S.CH<sub>2</sub>.CH(NH<sub>2</sub>).COOH

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

Pd++	kin	NaClO <sub>4</sub>	25°C	1.0M	U				1998VTa (39312) 302	
								K(Pd+HL=PdL+H)=1.82		
								K(Pd+H <sub>2</sub> L=PdHL+H)=2.43		

\*\*\*\*\*

C5H<sub>9</sub>N<sub>3</sub> L Histamine CAS 51-45-6 (103)

4(5)-(2'-Aminoethyl)imidazole; C3H3N2.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO3	25°C	0.10M	U	M			1999SSd (39543)	303
								K(Pd(pn)+L)=13.22		

pn is 1,2-diaminopropane. For amine protonation, K1=9.59, B2=15.65.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO3	37°C	0.16M	M	M			1998ESa (39544)	304

A is 1,3-diaminopropane.

\*\*\*\*\*  
C5H10N2O3                    HL        Glutamine                    CAS 56-85-9 (18)  
2-Aminopentanedioic acid 5-amide; H2N.CH(CH2.CH2.CO.NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO3	25°C	0.10M	U	M			1999SSd (39831)	305
								K(Pd(pn)+L)=11.02		

pn is 1,2-diaminopropane. For amide protonation, K1=8.98.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO3	37°C	0.16M	M	M			1998ESa (39832)	306

A is 1,3-diaminopropane.

\*\*\*\*\*  
Pd++                    gl        KCl                    25°C 0.50M U        M                    1977LIa (39833) 307  
K(Pd(en)+L)=10.8  
\*K(Pd(en)L)=-9.03

\*\*\*\*\*  
C5H10N2O3                    HL        Ala-Gly                    CAS 687-69-4 (55)  
Alanyl-glycine; H2N.CH(CH3).CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	0.20M	C				1999AJa (39893)	308

Medium: 0.1 M KNO3, 0.1 M KCl. B(PdH-2L2)=13.37; B(PdH-1L)=13.10.

\*\*\*\*\*  
C5H10N2O3                    HL        Gly-Ala                    CAS 3695-73-6 (56)  
Glycyl-alanine; H2N.CH2.CO.NH.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	0.20M	C				1999AJa (40005)	309

B(PdLC1)=18.00

$$\begin{aligned}B(\text{PdH-1LC1}) &= 16.01 \\B(\text{PdH-2L}) &= 4.80 \\B(\text{PdH-1L2}) &= 19.80\end{aligned}$$

Medium: 0.1 M KNO<sub>3</sub>, 0.1 M KCl. B(PdH-1L)=14.02.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M	1999SSd (40006)	310
							K(Pd(pn)+L)=8.17	
							K(Pd(pn)+L=PdH-1(pn)L+H)=3.69	

pn is 1,2-diaminopropane. For aminoacid protonation, K1=8.04.

\*\*\*\*\*

C5H10N2O3                    HL       Gly-b-Ala                    CAS 7536-21-2 (9057)

Glycyl-beta-alanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	oth/un	25°C	0.20M	C			K1=17.11	2003AMb (40010)	311
								K(PdH-1L)=14.93		
								K(PdH-2L)=6.00		
								K(PdH-1L2)=20.60		

Method: competition with chloride (0.1 M). Medium: 0.10 M KNO<sub>3</sub>/0.10 M KCl.

\*\*\*\*\*

C5H10N2O3                    HL       B-Ala-Gly                    CAS 2672-88-0 (4323)

beta-Alanyl glycine; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	oth/un	25°C	0.20M	C			K1=14.12	2003AMb (40051)	312
								K(PdH-1L)=11.09		
								K(PdH-2L)=2.38		
								K(PdH-1L2)=17.43		

Method: competition with chloride (0.1 M). Medium: 0.10 M KNO<sub>3</sub>/0.10 M KCl.

\*\*\*\*\*

C5H10N4O3                    L                                    CAS 54376-69-1 (8335)

N,N'-Carbonylbis(2-aminoacetamide);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++                    gl    NaClO<sub>4</sub>    25°C    0.10M    U    TIH    K1=10.75    B2=17.25    1980SAC (40137) 313

Data for 0.075-0.15 M. At I=0, K1=11.15, K2=6.70. Also data for 30 C.

DH and DS values.

\*\*\*\*\*

C5H10OS2                    HL                                    CAS 110-50-9 (591)

(Butoxy)dithiomethanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.CH<sub>2</sub>.CH<sub>2</sub>.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++                    dis    oth/un    25°C    0.25M    U    B2=>24    1982SAa (40163) 314

\*\*\*\*\*

C5H11N                    L    Piperidine                    CAS 110-89-4 (105)

Perhydropyridine; cyclo(-CH<sub>2</sub>.CH<sub>2</sub>.CH<sub>2</sub>.NH.CH<sub>2</sub>.CH<sub>2</sub>-)    C5H11N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	non-aq	25°C	100%	U				1994CVa (40452)	315
								$K(PdAB+2L=PdAL2+B)=3.14$		
								$K(PdAC+2L=PdAL2+C)=0.28$		
Medium:	CHCl <sub>3</sub> .	A:n3-allyl;	B:4-MeOC <sub>6</sub> H <sub>4</sub> .N=CH.CH=N.C <sub>6</sub> H <sub>4</sub> OMe;	C:4-MeOC <sub>6</sub> H <sub>4</sub> .N=C(Me).C(Me)=N.C <sub>6</sub> H <sub>4</sub> OMe.	Also data for L=morpholine, NHET <sub>2</sub> , N-methylaniline.					
C5H <sub>11</sub> N <sub>2</sub>		HL		Valine			CAS	72-18-4 (43)		
2-Amino-3-methylbutanoic acid; H <sub>2</sub> N.CH(CH(CH <sub>3</sub> ) <sub>2</sub> )COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M			1999SSd (40742)	316
								$K(Pd(pn)+L)=11.36$		
pn is 1,2-diaminopropane. For aminoacid protonation, K1=9.57, B2=11.70.										
Pd++	gl	NaNO <sub>3</sub>	37°C	0.16M	M	M			1998ESa (40743)	317
								$K(PdA+L)=9.55$		
A is 1,3-diaminopropane.										
Pd++	gl	KNO <sub>3</sub>	20°C	0.5M	U		K1=9.62	B2=17.76	1974KHb (40744)	318
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
C5H <sub>11</sub> N <sub>2</sub>		L					(8054)			
Alanine ethyl ester;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	M	M	K1=5.15		1987SKb (40866)	319
								$K(Pd(dien)+L)=3.92$		
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
C5H <sub>11</sub> N <sub>2</sub> S		HL		Methionine			CAS	63-68-3 (42)		
2-Amino-4-(methylthio)butanoic acid; H <sub>2</sub> N.CH(CH <sub>2</sub> .CH <sub>2</sub> .S.CH <sub>3</sub> )COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO <sub>4</sub>	25°C	1.00M	C		K1=16.8	B2=34.30	2000SAb (41115)	320
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M			1999SSd (41116)	321
								$K(Pd(pn)+L)=10.37$		
pn is 1,2-diaminopropane. For aminoacid protonation, K1=9.10, B2=11.08.										
Pd++	gl	NaNO <sub>3</sub>	37°C	0.16M	M	M			1998ESa (41117)	322
								$K(PdA+L)=8.83$		
A is 1,3-diaminopropane.										
Pd++	gl	KNO <sub>3</sub>	25°C	0.50M	U				1978LJa (41118)	323
								$K(Pd(en)+L)=9.14$		
								$K(Pd(en)+HL)=0.74$		

\*\*\*\*\*

C5H11NO2S H2L Penicillamine CAS 52-66-4 (350)  
DL-2-Amino-3-mercaptopropanoic acid; (CH<sub>3</sub>)<sub>2</sub>C(SH)CH(NH<sub>2</sub>)COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	gl	NaClO <sub>4</sub>	25°C	1.00M	C		B2=48.2 K(Pd+HL)=27.3 K(Pd+2HL)=44.8	2000SAb (41278)	324

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C5H11NO3 L (8128)

Serine ethyl ester;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	M	M		1987SKb (41312)	325

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C5H11NS2 HL CAS 147-84-2 (2126)

Diethyldithiocarbamic acid; (CH<sub>3</sub>.CH<sub>2</sub>)<sub>2</sub>N.CSSH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	dis	oth/un	?	?	U	M	B2=64.9 B(PdLCI)=44.6	1969BHd (41367)	326

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	sp	non-aq	?	100%	U	M		1968SRg (41368)	327

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K(Pd(HA)<sub>2</sub>+2HL=PdL<sub>2</sub>+2H<sub>2</sub>A)=1.6

Medium: CC<sub>14</sub>. H<sub>2</sub>A=dithizone

\*\*\*\*\*

C5H12N202 HL Ornithine CAS 1069-31-4 (46)

2,5-Diaminopentanoic acid; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.CH<sub>2</sub>.CH(NH<sub>2</sub>)COOH

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M		1999SSd (41582)	328

---

K(Pd(pn)+L)=13.65  
K(Pd(pn)+H+L)=19.86

pn is 1,2-diaminopropane. For aminoacid protonation, K1=10.58, B2=19.43.

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	gl	NaNO <sub>3</sub>	37°C	0.16M	M	M		1998ESa (41583)	329

---

K(PdA+L)=11.58  
K(PdA+H+L)=18.56

A is 1,3-diaminopropane.

\*\*\*\*\*

C5H12N202S HL Met-hydroxamic CAS 19253-87-3 (5992)

2-Amino-4-(methylthio)butanehydroxamic acid, Methionine hydrox.a.;  
CH<sub>3</sub>.S.CH<sub>2</sub>.CH<sub>2</sub>.CH(NH<sub>2</sub>).CO.NHOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Pd++ gl KCl 25°C 0.15M U M K1=13.230 B2=23.333 1990MSa (41607) 330  
 B(PdL(GlyGly))=21.058  
 B(PdHL(GlyGly))=24.370  
 B(Pd(GlyGly))=9.155

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C5H13N3 L (1866)  
 cis-3,5-Diaminopiperidine; C5H9N(NH2)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO4	20°C	0.10M	U				1979MSa (41795)	331
								K(PdL2+H)=6.35		
								K(PdHL2+H)=4.16		

pK's for the other isomer of PdL2  
 together with X-ray structure

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C6H3N3O7 HL Picric acid CAS 88-89-1 (593)  
 2,4,6-Trinitrophenol; HO.C6H2(NO2)3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	0.20M	C	M			2001NSa (42142)	332
								*K(PdL(H2O)2)=-5.00		
								*B2(PdL(H2O)2)=-13.79		

K(2PdL(H2O)2=Pd2(OH)L2+H)=-2.28, K(2PdL(H2O)2=Pd2(OH)L2+2H)=-6.59

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C6H4N2O7S H3L (2023)  
 2,4-Dinitroso-6-sulfonoresorcinol; (HO)2.C6H(N:O)2(SO3H)

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	none	25°C	0.0	U			K1=4.2 B2=8.3	1980MGa (42269)	333

---

C6H5N02 L Nitrobenzene CAS 98-95-3 (3085)  
 Nitrobenzene; C6H5.NO2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	M			1994PAa (42701)	334
								K(Pd3A3CO+L)=0.24		

Medium: MeOH. A=Bis(diphenylphosphino)methane

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C6H5N02S H2L (6876)  
 2-Mercaptopyridine-3-carboxylic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	40%	C				1996ABC (42708)	335
								K(Pd+HL)=16.10		

$$K(Pd+H_2L)=8.75$$

$$K(Pd+H_3L=PdH_2L+H)=3.05$$

$$*K(PdH_2L)=-3.15$$

Medium: 40% v/v EtOH/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	M			1994PAa (43169)	336
								$K(Pd_3A_3CO+L)<-1.15$		

Medium: MeOH. A=Bis(diphenylphosphino)methane

\*\*\*\*\*  
C6H6NBr L 3-Bromoaniline CAS 591-19-5 (758)  
3-Bromoaniline; H<sub>2</sub>N.C6H4.Br

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO <sub>4</sub>	25°C	2.00M	U	M			1972VGa (43177)	337
								$K(M(H_2O)_4+L=M(H_2O)_3L+H_2O)=6.30$		

Medium: HClO<sub>4</sub>

\*\*\*\*\*  
C6H6N2O2 L m-Nitroaniline CAS 99-09-2 (464)  
3-Nitroaminobenzene; H<sub>2</sub>N.C6H4.NO<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO <sub>4</sub>	25°C	2.00M	U	M			1972VGa (43389)	338
								$K(M(H_2O)_4+L=M(H_2O)_3L+H_2O)=5.68$		

Medium: HClO<sub>4</sub>

\*\*\*\*\*  
C6H6N2O2 L p-Nitroaniline CAS 100-01-6 (465)  
4-Nitroaminobenzene; H<sub>2</sub>N.C6H4.NO<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO <sub>4</sub>	25°C	2.0M	U				1972VGa (43405)	339
								$K(Pd(H_2O)_4+L=Pd(H_2O)_3L)=4.53$		

\*\*\*\*\*  
C6H6O2 H2L Catechol CAS 120-80-9 (534)  
1,2-Dihydroxybenzene, pyrocatechol; HO.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	NaClO <sub>4</sub>	25°C	0.20M	U				1981CMb (43807)	340
								$K(Pd+H_2L=PdL+2H)=-2.2$		

\*\*\*\*\*  
C6H6O4 HL Kojic acid CAS 501-30-4 (1800)  
5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;



$$K(Pd(pic)(H_2O) + L = Pd(pic)(OH)L + H) = 1.56$$

$$K(2Pd(pic)(H_2O) + 2L = Pd_2(pic)_2(OH)_2L_2 + H) = 14.30. \text{ Hpic=picric acid.}$$

Pd++ gl KN03 25°C 0.20M C K1=7.71 2000NFa (45385) 347

Pd++ gl KN03 25°C 0.20M C 1997WKa (45386) 348  
K(PdACl+L=PdAL+C1)=7.26

PdA is [PdH-1(gly-Met)].

C6H8O4 H2L CAS 5445-51-2 (69)

Cyclobutane-1,1-dicarboxylic acid; C4H6(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ gl NaClO4 37°C 0.15M C M 2003TMb (45509) 349  
K(Pd(en)+L)=6.16

Pd++ gl NaClO4 25°C 0.10M M M 2002BSa (45510) 350  
K(PdA+L)=6.61  
K(PdA+H+L)=9.69

HA is S-methyl cysteine.

Pd++ gl NaNO3 25°C 0.10M C M 2002MSb (45511) 351  
K(PdA+L)=7.17  
K(PdA+H+L)=9.44

A is N,N'-dimethylethylenediamine.

Pd++ gl NaNO3 25°C 0.10M C M 2001SHc (45512) 352  
K(Pd(bpy)(H2O)2+L)=8.45  
K(Pd(bpy)(H2O)2+H+L)=11.37

Pd++ gl NaNO3 25°C 0.10M C M 2001SHc (45513) 353  
K(Pd(bpy)(H2O)2+L+A)=18.31  
K(Pd(bpy)(H2O)2+L+A+H)=24.76  
K(Pd(bpy)(H2O)2+L+A+2H)=27.05

HA is uracil.

Pd++ gl NaNO3 25°C 0.10M C M 2001SHc (45514) 354  
K(Pd(bpy)(H2O)2+L+A)=20.14  
K(Pd(bpy)(H2O)2+L+A+H)=26.74  
K(Pd(bpy)(H2O)2+L+A+2H)=28.62

HA is uridine.

Pd++ gl NaNO3 25°C 0.10M C M 2001SHc (45515) 355  
K(Pd(bpy)(H2O)2+L+A)=16.64  
K(Pd(bpy)(H2O)2+L+A+H)=22.77  
K(Pd(bpy)(H2O)2+L+A+2H)=25.58

HA is inosine.

Pd++ gl NaNO3 25°C 0.10M C M 2001SHc (45516) 356

$$\begin{aligned} K(Pd(bpy)(H_2O)_2+L+A) &= 17.06 \\ K(Pd(bpy)(H_2O)_2+L+A+H) &= 23.24 \\ K(Pd(bpy)(H_2O)_2+L+A+2H) &= 27.08 \end{aligned}$$

A is adenine.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M	2001SHc (45517)	357
							K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +L+A)=16.00	
							K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +L+A+H)=22.42	
							K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +L+A+2H)=27.92	
							K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +L+A+3H)=31.49	

H3A is inosine-5'-monophosphate.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M	1999SSd (45518)	358
							K(Pd(pn)+L)=6.05	
							pn is 1,2-diaminopropane. For acid protonation, K1=5.42 B2=8.06.	
Pd++	gl	NaNO <sub>3</sub>	37°C	0.16M	M	M	1998ESa (45519)	359

A is 1,3-diaminopropane.

Pd++	gl	NaClO <sub>4</sub>	25°C	0.10M	C	M	1997RSA (45520)	360
							K(PdA+L)=7.34	

A=2-(Aminomethyl)pyridine

C6H8O <sub>6</sub> S	H3L	CAS 99-68-3 (3692)
(Carboxymethylthio)butanedioic acid; HOOC.CH(S.CH <sub>2</sub> .COOH).CH <sub>2</sub> .COOH		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	20°C	0.10M	U			K1=5.20	1977CAd (45707)	361
C6H8O <sub>7</sub>	H3L	Citric acid						CAS 77-92-9 (95)		
2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCCH <sub>2</sub> .CH(OH)(COOH).CH <sub>2</sub> COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	NaClO <sub>4</sub>	25°C	1.00M	U	H		K1=3.46	1997SEa (46230)	362
DH(Pd+HL=PdL+H)=-3.4 kJ mol <sup>-1</sup> , DS(Pd+HL=PdL+H)=2 J K <sup>-1</sup> mol <sup>-1</sup>								K(Pd+HL=PdL+H)=0.66		
C6H9N <sub>6</sub> O <sub>6</sub>	H3L	NTA						CAS 139-13-9 (191)		
Nitrilotriethanoic acid; N(CH <sub>2</sub> .COOH) <sub>3</sub>										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO <sub>4</sub>	20°C	1.00M	C	M T	K1=17.1	B2=23.70	1976AMa (46982)	363

$$\begin{aligned} K(PdL+H) &= 2.48 \\ K(PdHL+H) &= 0.5 \\ K(PdL(OH)+H) &= 7.82 \\ K(PdL+PdL(OH)) &= Pd2L2(OH) = 3.1 \end{aligned}$$

By exchange with PdBr<sub>4</sub>. K(PdL+Br)=2.7

\*\*\*\*\*  
C6H9N3O2                   HL     Histidine           CAS 71-00-1 (1)  
2-Amino-3-(4'-imidazolyl)propanoic acid; H2N.CH(CH<sub>2</sub>.C3H<sub>3</sub>N<sub>2</sub>)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M			1999SSd (47602)	364
								K(Pd(pn)+L)=14.75		
pn is 1,2-diaminopropane. For aminoacid protonation, K1=9.53, B2=15.81, B3=17.81.										
Pd++	gl	NaNO <sub>3</sub>	37°C	0.16M	M	M			1998ESa (47603)	365
								K(PdA+L)=12.48		

A is 1,3-diaminopropane.

\*\*\*\*\*  
C6H1004S                   H2L                   CAS 111-17-1 (139)  
3,3'-Thiodipropanoic acid; HOOC.CH<sub>2</sub>.CH<sub>2</sub>.S.CH<sub>2</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	NaCl	25°C	0.50M	U	M			1987CMc (48193)	366
								K(PdCl <sub>4</sub> +L=PdCl <sub>3</sub> L+C <sub>1</sub> )=5.42		
								K(PdCl <sub>3</sub> L+L=PdCl <sub>2</sub> L <sub>2</sub> +C <sub>1</sub> )=2.87		
								K(PdL <sub>2</sub> +C <sub>1</sub> )=4.30		
								K(PdL <sub>2</sub> C <sub>1</sub> +C <sub>1</sub> )=2.51		
Pd++	sp	NaClO <sub>4</sub>	25°C	0.50M	U				1986CCe (48194)	367
								B(PdH <sub>2</sub> L)=16.71		
								B(PdH <sub>4</sub> L <sub>2</sub> )=31.60		
								K(Pd+H <sub>2</sub> L)=7.40		
								K(PdH <sub>2</sub> L+H <sub>2</sub> L)=5.58		

\*\*\*\*\*  
C6H1004S2                   H2L                   CAS 7244-02-2 (438)  
1,2-Bis(carboxymethylthio)ethane; HOOC.CH<sub>2</sub>.S.CH<sub>2</sub>.CH<sub>2</sub>.S.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	25°C	0.10M	U			K1=4.48      B2=6.91	1978POa (48249)	368
									*****	
C6H1004S2		H2L						CAS 1119-62-6 (3697)		
3,3'-Di(thiopropanoic acid); HOOC.CH <sub>2</sub> .CH <sub>2</sub> .S.S.CH <sub>2</sub> .CH <sub>2</sub> .COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	NaClO <sub>4</sub>	25°C	0.50M	U				1986CCe (48270)	369
								B(PdH <sub>2</sub> L)=15.25		
								B(Pd <sub>2</sub> H <sub>2</sub> L)=19.67		
								K(Pd+H <sub>2</sub> L)=5.92		
								K(PdH <sub>2</sub> L+H <sub>2</sub> L)=10.34		

\*\*\*\*\*

C6H1004Se2 H2L CAS 86515-79-7 (6099)  
Ethylene-bis-selenoglycolic acid; HOOC.CH2.Se.CH2.CH2.Se.CH2.COOH

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

---

Pd++ con NaCl 25°C 3.00M C K1=6.32 B2=11.97 1988PfB (48297) 370

\*\*\*\*\*

C6H11N02 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

---

Pd++ sp none 25°C 0.0 U K1=11.20 B2=21.23 1974HFa (48504) 371

\*\*\*\*\*

C6H11N04 H2L Aminoadipic 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

---

Pd++ gl none 25°C 0.0 U 1979FWa (48583) 372  
K(PdL2+H)=5.04  
K(PdHL2+H)=4.45  
K(PdCl4+2HL=PdH2L2+4Cl)=10.5

\*\*\*\*\*

C6H11N304 HL Gly-Gly-Gly CAS 556-33-2 (415)  
Glycyl-glycyl-glycine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.COOH

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

---

Pd++ gl KN03 25°C 0.20M C B2=23.0 1999AJa (48987) 373  
B(PdLC1)=17.91  
B(PdH-1LC1)=14.64  
B(PdH-2L)=9.07  
B(PdH-3L)=-1.15

Medium: 0.1 M KN03, 0.1 M KC1. B(PdH-1L2)=19.81; B(PdH-2L2)=13.40.

Pd++ sp oth/un 25°C ? U 1978CWa (48988) 374  
K(PdH-2L+H)=2.2  
K(PdH-1L+H)=1.5

\*\*\*\*\*

C6H12 L CAS 592-41-6 (2771)  
1-Hexene; CH<sub>2</sub>:CH(CH<sub>2</sub>)<sub>3</sub>.CH<sub>3</sub>

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

---

Pd++ oth non-aq 30°C 100% U M 1974KKb (49012) 375  
K(PdCl2+L)=0.28

Medium: N-methylacetamide

\*\*\*\*\*

C6H12 L CAS 760-21-4 (2772)  
2-Ethyl-1-butene; CH<sub>2</sub>:C(C<sub>2</sub>H<sub>5</sub>).CH<sub>2</sub>.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	oth	non-aq	30°C	100%	U	M			1974Kkb (49015)	376
								$K(PdCl_2+L) = -0.89$		

Medium: N-methylacetamide

C6H12 L CAS 763-29-1 (2770)  
2-Methyl-1-pentene: CH<sub>2</sub>:C(CH<sub>3</sub>):CH<sub>2</sub>.CH<sub>2</sub>.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	oth	non-aq	30°C	100%	U	M			1974KKb (49017)	377

Medium: N-methylacetamide       $K(\text{rac}1/2) = 0.65$

\*\*\*\*\*

C6H12 L CAS 691-37-2 (2767)  
4-Methyl-1-pentene: CH<sub>2</sub>:CH.CH<sub>2</sub>.CH(CH<sub>3</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	oth	non-aq	30°C	100%	U	M			1974KKb (49019)	378

Medium: N-methylacetamide

**C6H12** | CAS 7668-21-3 (2774)

cis-2-Hexene; CH <sub>3</sub> .CH:CH.CH <sub>2</sub> .CH <sub>2</sub> .CH <sub>3</sub>										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

Pd++      8th non-ag. 30°C 100% II M      1974KKh (49021) 379

K(PdCl<sub>2</sub>+L)=0.11

Medium: N-methylacetamide

C6H12 L (2768)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	oth	non-aq	30°C	100%	U	M			1974KKb (49023)	380

$$K(PdC12+L) = 0.26$$

Medium: N-methylacetamide

\*\*\*\*\*  
C6H12                    L                    CAS 4050-45-7 (2773)

trans-2-Hexene; CH<sub>3</sub>.CH:CH.CH<sub>2</sub>.CH<sub>2</sub>.CH<sub>3</sub>

Pd++ oth non-aq 30°C 100% U M 1974KKb (49025) 381  
K(PdCl<sub>2</sub>+L)=-0.31

Medium: N-methylacetamide

\*\*\*\*\*  
C6H12 L CAS 4461-48-7 (2769)  
trans-4-Methyl-2-pentene; CH<sub>3</sub>.CH:CH.CH(CH<sub>3</sub>)<sub>2</sub>

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ oth non-aq 30°C 100% U M 1974KKb (49027) 382  
K(PdCl<sub>2</sub>+L)=-0.42

Medium: N-methylacetamide

\*\*\*\*\*  
C6H12N2O3 HL B-Ala-B-Ala CAS 34322-87-7 (2118)  
3-Alanyl-3-alanine; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.CH<sub>2</sub>.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl KNO<sub>3</sub> 25°C 0.20M C 2003AMb (49061) 383  
K(PdH-1L)=11.19  
K(PdH-2L)=2.52  
K(PdH-1L2)=17.76

Method: competition with chloride (0.1 M). Medium: 0.10 M KNO<sub>3</sub>/0.10 M KCl.

\*\*\*\*\*  
C6H12O2S2 HL CAS 35088-67-6 (2829)  
1-Ethylthio-2-thiocarboxymethylethane; C<sub>2</sub>H<sub>5</sub>.S.CH<sub>2</sub>.CH<sub>2</sub>.S.CH<sub>2</sub>.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sp oth/un 25°C 0.10M U K1=6.34 B2=11.03 1978POa (49451) 384

\*\*\*\*\*  
C6H13N02 HL Isoleucine CAS 73-32-5 (424)  
2-Amino-3-methylpentanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.CH(CH<sub>3</sub>).CH(NH<sub>2</sub>).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl KNO<sub>3</sub> 20°C 0.5M U K1=9.71 B2=18.15 1974Kb (49911) 385

\*\*\*\*\*  
C6H13N02 HL Leucine CAS 61-90-5 (47)  
2-Amino-4-methylpentanoic acid; H<sub>2</sub>N.CH(CH<sub>2</sub>.CH(CH<sub>3</sub>)<sub>2</sub>).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl KNO<sub>3</sub> 25°C 0.50M U T 1978LIa (50096) 386  
K(Pd(en)+L)=11.41

-----  
Pd++ gl KNO<sub>3</sub> 20°C 0.5M U K1=9.94 B2=18.17 1974Kb (50097) 387

\*\*\*\*\*  
C6H13N02S HL Ethionine CAS 67-21-0 (1909)  
2-Amino-4-(ethylthio)butanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.S.CH<sub>2</sub>.CH(NH<sub>2</sub>).COOH



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO4	25°C	1.00M	C	I M		K1=40.1	1985YAa (52131)	395
*****										
C6H18N4		L	Tren				CAS	4097-89-6	(817)	
2,2',2'''-Triaminotriethylamine; (H2N.CH2.CH2)3N										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	1.00M	C	M			1986ANa (52207)	396
B(Pd2L2)=77.4										
Ternary complexes with Cl-, Br-, I- and SCN-. pH-metric and spec. study.										
*****										
C7H5N		L	Cyanobenzene				CAS	100-47-0	(4406)	
Cyanobenzene, benzonitrile; C6H5.CN										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	M			1994PAa (52570)	397
K(Pd3A3CO+L)=0.13										
Medium: MeOH. A=Bis(diphenylphosphino)methane										
*****										
C7H5N04		H2L	Dipicolinic aci				CAS	449-83-2	(418)	
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KCl	25°C	0.20M	U			K1=16.0	1980KDb (52799)	398
*****										
C7H6O2		HL	Salicylaldehyde				CAS	90-02-8	(193)	
2-Hydroxybenzaldehyde, Salicylaldehyde; HO.C6H4.CHO										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	diox/w	25°C	50%	U			K1=7.74 B2=14.77	1949MMa (53631)	399
*****										
C7H6O2		HL	Benzoic Acid				CAS	65-85-0	(462)	
Benzene carboxylic acid; C6H5.COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	M			1994PAa (53853)	400
K(Pd3A3CO+L)=4.0										
Medium: MeOH. A=Bis(diphenylphosphino)methane										
*****										
C7H7N02		HL					CAS	150-13-0	(1376)	
4-Aminobenzoic acid; H2N.C6H4.COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

Pd++	sp	alc/w	25°C	100%	U	M	1994PAa (55390) 401 K(Pd3A3CO+L)=3.52
Medium: MeOH. A=Bis(diphenylphosphino)methane							
C7H7N02		HL			CAS 495-18-1	(184)	
Benzohydroxamic acid; C6H5.CO.NH.OH							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values Reference ExptNo
Pd++	gl	diox/w	25°C	70%	U		K1=9.52 B2=17.55 1969JSa (55512) 402
*****							
C7H8		L			CAS 108-88-3	(2144)	
Toluene; C6H5.CH3							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values Reference ExptNo
Pd++	sp	alc/w	25°C	100%	U	M	1994PAa (55785) 403 K(Pd3A3CO+L)=-1.10
*****							
Medium: MeOH. A=Bis(diphenylphosphino)methane							
C7H8O5		L			CAS 1193-82-4	(1881)	
Phenylmethylsulfoxide; C6H5.SO.CH3							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values Reference ExptNo
Pd++	sp	alc/w	25°C	95%	U		1982CCa (56055) 404 K(PdCl4+L=PdLC13+C1)=0.94
*****							
C7H8O2		H2L	Methylcatechol		CAS 452-86-8	(525)	
1,2-Dihydroxy-4-methylbenzene; CH3.C6H3(OH)2							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values Reference ExptNo
Pd++	sp	oth/un	25°C	0.20M	U		1981CMa (56075) 405 K(Pd+H2L=PdL+2H)=2.40
*****							
C7H9N		L	3-Methylaniline		CAS 108-44-1	(755)	
3-Methylaniline (3-Toluidine); CH3.C6H4.NH2							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values Reference ExptNo
Pd++	kin	oth/un	25°C	?	U	M	1972VGa (56309) 406 K(M(H2O)4+L=M(H2O)3L+H2O)=7.57
*****							
C7H9N		L	4-Methylaniline		CAS 106-49-0	(754)	
4-Methylaniline (4-Toluidine); CH3.C6H4.NH2							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values Reference ExptNo

Pd++      kin oth/un 25°C    ?    U    M      1972VGa (56343) 407  
 $K(M(H_2O)_4 + L = M(H_2O)_3L + H_2O) = 8.04$   
\*\*\*\*\*

C7H9N0      L    p-Anisidine      CAS 104-94-7 (3764)  
4-Methoxyaniline; CH<sub>3</sub>O.C<sub>6</sub>H<sub>4</sub>.NH<sub>2</sub>

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	kin	oth/un	25°C	2.0M	U	M			1972VGa (56397)	408
								$K(M(H_2O)_4 + L = M(H_2O)_3L + H_2O) = 7.81$		

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C7H9N50      HL    9-Ethylguanine      CAS 879-08-3 (6679)  
9-Ethyl-2-amino-6-hydroxypurine;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	M			2003NFA (56518)	409
								$K(PdA+L) = 8.11$		
								$K(PdA+H+L) = 15.06$		
								$K(2PdA+L) = 14.95$		

A is bis-((2-pyridyl)methyl)amine

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C7H10N4O2S      L    Sulfaguanidine      CAS 57-67-0 (4469)  
4-Aminobenzenesulfonyl guanidine; H<sub>2</sub>N.C(:NH).NH.SO<sub>2</sub>.C<sub>6</sub>H<sub>4</sub>.NH<sub>2</sub>

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	NaClO <sub>4</sub>	?	1.0M	U	M			1970RGa (56704)	410
								$K(PdCl_2+L) = 5.42$		
								$K(PdCl_2L+L) = 4.38$		

---

C7H11N30      L    Acetylhistamine      CAS 673-49-4 (7412)  
4-(2'-Acetylaminoethyl)imidazole; C<sub>3</sub>H<sub>3</sub>N<sub>2</sub>.CH<sub>2</sub>CH<sub>2</sub>.NH.COCH<sub>3</sub>

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	M			2003NFA (56961)	411
								$K(PdA+L) = 7.72$		
								$K(2PdA+L = (PdA)2H - 1L + H) = 6.13$		

A is bis-((2-pyridyl)methyl)amine

---

PdA is [PdH-1(gly-Met)].

---

C7H11N302      L      CAS 7389-87-9 (3162)  
Histidine methyl ester

---

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

Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	M	M	1987SKb (57005) 413	
							K(Pd(dien)+L)=4.61	
							K(Pd(dien)+H+L)=10.58	
*****	*****	*****	*****	*****	*****	*****	*****	
C7H13N02		HL			CAS 3235-67-4 (3772)			
Piperidine-N-ethanoic acid; C5H10N-CH <sub>2</sub> .COOH								
-----	-----	-----	-----	-----	-----	-----	-----	
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Pd++	sp	none	25°C	0.0	U		K1=10.32 B2=19.72	1974HFa (57456) 414
*****	*****	*****	*****	*****	*****	*****	*****	*****
C7H13N03S		HL			CAS 65-82-7 (8508)			
N-Acetylmethionine;								
-----	-----	-----	-----	-----	-----	-----	-----	-----
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	M		2003NFa (57495) 415
							K(PdA+L)=3.41	
A is bis-((2-pyridyl)methyl)amine. Competitive method using uridine.								
-----	-----	-----	-----	-----	-----	-----	-----	-----
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	HM		2000NFa (57496) 416
							K(Pd(dien)+H+L)=8.49	
							K(Pd(dien)+L)=5.61	
							K(PdA+H+L)=7.07	
							K(PdA+L)=3.66	
Method: uridine as a competitive ligand. A is terpyridine. K(Pd(dien)+OH)=6.25, K(PdA+OH)=6.91. By calorimetry: DH(Pd(dien)+L)=-38.8 kJ mol <sup>-1</sup> .								
-----	-----	-----	-----	-----	-----	-----	-----	-----
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	HM		2000NFa (57497) 417
							K(Pd(gly-gly)+H+L)=8.74	
							K(Pd(gly-gly)+L)=4.89	
							K(Pd(gly-ala)+H+L)=8.76	
							K(Pd(gly-ala)+L)=4.91	
Method: uridine as a competitive ligand. K(Pd(gly-gly)+OH)=4.64, K(Pd(gly-ala)+OH)=4.72. By calorimetry: DH(Pd(gly-ala)+L)=-38.0 kJ mol <sup>-1</sup> .								
-----	-----	-----	-----	-----	-----	-----	-----	-----
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	HM		2000NFa (57498) 418
							K(Pd(gly-met)+H+L)=7.29	
							K(Pd(gly-met)+L)=3.24	
							K(Pd(gly-met)+OH)=4.82	
Method: uridine as a competitive ligand.								
By calorimetry: DH(Pd(gly-met)+L)=-21.2 kJ mol <sup>-1</sup> .								
*****	*****	*****	*****	*****	*****	*****	*****	*****
C7H13N04		H2L		Aminopimelic		CAS 627-76-9 (1260)		
2-Amino-heptanedioic acid; HOOC.(CH <sub>2</sub> ) <sub>4</sub> .CH(NH <sub>2</sub> ).COOH								
-----	-----	-----	-----	-----	-----	-----	-----	-----
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Pd++	gl	KCl	25°C	0.10M	U			1979FWa (57501) 419

$$\begin{aligned} K(Pd(HL)2=Pd(HL)L+H) &= 4.58 \\ K(Pd(HL)L=PdL2+H) &= 5.33 \\ K(PdCl4+2HL=Pd(HL)2+4Cl) &= 11.5 \end{aligned}$$

\*\*\*\*\*

C7H13N304 HL Ala-Asn CAS 1999-41-3 (5934)

Alanyl-asparagine; NH<sub>2</sub>.CH(CH<sub>3</sub>.CO.NH.CH(CH<sub>2</sub>.CO.NH<sub>2</sub>).COOH

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

Pd++	sp	NaCl	20°C	0.15M	U	1990YKa (57648) 420
------	----	------	------	-------	---	---------------------

$$K_{eff}(Pd+L+2Cl)=21.5$$

Eff constant : stability of PdCl<sub>4</sub> is not accounted

\*\*\*\*\*

C7H13N304 HL Gly-b-Ala-Gly CAS 42538-54-5 (9058)

Glycyl-beta-alanylglycine;

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

Pd++	gl	oth/un	25°C	0.20M	C	K1=16.26 2003AMb (57660) 421
------	----	--------	------	-------	---	------------------------------

$$K(PdH-1L)=12.06$$

$$K(PdH-2L)=11.79$$

Method: competition with chloride (0.1 M). Medium: 0.10 M KNO<sub>3</sub>/0.10 M KCl.

\*\*\*\*\*

C7H13N304 HL Gly-Gly-b-Ala CAS 42538-53-4 (4453)

Glycylglycyl-beta-alanine; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.CH<sub>2</sub>.COOH

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

Pd++	gl	oth/un	25°C	0.20M	C	K1=16.79 2003AMb (57679) 422
------	----	--------	------	-------	---	------------------------------

$$K(PdH-1L)=10.97$$

$$K(PdH-2L)=10.98$$

Method: competition with chloride (0.1 M). Medium: 0.10 M KNO<sub>3</sub>/0.10 M KCl.

\*\*\*\*\*

C7H13N304 HL Gly-Gly-Ala CAS 19729-30-7 (3775)

Glycylglycylalanine; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.CO.NH.CH(CH<sub>3</sub>).COOH

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

Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	B2=23.7 1999AJa (57687) 423
------	----	------------------	------	-------	---	-----------------------------

$$B(PdLC1)=17.91$$

$$B(PdH-1LC1)=14.45$$

$$B(PdH-2L)=8.99$$

$$B(PdH-3L)=-2.40$$

Medium: 0.1 M KNO<sub>3</sub>, 0.1 M KCl. B(PdH-1L2)=19.60; B(PdH-2L2)=15.74.

\*\*\*\*\*

C7H13N304 HL b-Ala-Gly-Gly CAS 42538-55-6 (4452)

beta-Alanylglycylglycine; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.COOH

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

Pd++ gl oth/un 25°C 0.20M C K1=14.40 2003AMB (57694) 424  
K(PdH-1L)=8.76  
K(PdH-2L)=9.03

Method: competition with chloride (0.1 M). Medium: 0.10 M KNO<sub>3</sub>/0.10 M KCl.

C7H14N2O3S HL Gly-Met CAS 554-94-9 (726)

Glycyl-methionine; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH.CH(CH<sub>2</sub>.CH<sub>2</sub>.S.CH<sub>3</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KCl	25°C	0.20M	C	M			2001BNA (57800)	425
								*K(PdL)=-3.61		
								K(PdH-1L+C1)=2.03		
								*K(PdH-1L)=-5.34		
								K(PdH-1L+H+L)=11.47		

K(PdH-1L+L)=4.56, K(PdH-1L+glygly)=4.72.

C7H15N05S HL MOPS0 CAS 68399-77-9 (1967)

3-(N-Morpholino)-2-hydroxypropane sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.10M	C	M	K1=3.50	2001AAa (57996)	426	
								Also data for ternary complexes with 5'-GMP, 5'-IMP and 5'-CMP.		

C7H17N204PS H2L CAS 82611-22-1 (7392)

Methionyl-1-aminoethylphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.10M	C		B2=21.60	1997LBa (58201)	427	
							B(PdHCl2)=24.01			
							B(PdLC1)=17.87			
							B(PdH-1L)=10.76			
							B(PdH-2L)=-0.01			

Data are for (S,S)-isomer. B(PdH2L2)=34.96, B(PdHL2)=28.74, B(PdH-1L2)=12.51  
B(PdH-2L2)=2.48. Data also for (R,S)-isomer.

Pd++	gl	KCl	25°C	0.10M	U				1996BRa (58202)	428
								K(Pd+2L+2H)=35.35		
								K(Pd+2L)=21.99		
								K(Pd+2L+H)=29.14		

H2L: S,S-diastereoisomer

Pd++	gl	KCl	25°C	0.10M	U				1996BRa (58203)	429
								K(Pd+2L+2H)=35.01		
								K(Pd+2L)=21.54		
								K(Pd+2L+H)=28.71		

H2L: S,R-diastereoisomer

\*\*\*\*\*

C7H20N4 L CAS 4741-99-5 (12)  
1,4,8,11-Tetraazaundecane; H2N.CH2.CH2.NH.CH2.CH2.CH2.NH.CH2.CH2.NH2

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

Pd++ gl NaClO4 25°C 1.00M C K1=46.3 1985YAa (58359) 430  
\*\*\*\*\*

C8H6O4 H2L Phthalic acid CAS 88-99-3 (113)  
Benzene-1,2-dicarboxylic acid; C6H4(COOH)2

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

Pd++ gl KN03 25°C ? M M K1=3.31 1988SKa (59003) 431  
K(PdA+L)=3.04

A=diethylenetriamine

C8H8N02Cl HL CAS 61756-69-2 (4569)  
N-Acetyl-N-(4-chlorophenyl)hydroxamine; Cl.C6H4.N(CO.CH3).OH

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

Pd++ gl diox/w 25°C 70% U K1=9.63 B2=17.37 1968JSb (59281) 432  
Medium: 70% dioxan, 0.1 M KCl

C8H8O2 HL p-Toluic acid CAS 99-94-5 (1372)  
4-Methylbenzoic acid; CH3.C6H4.COOH

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

Pd++ sp alc/w 25°C 100% U M 1994PAa (59501) 433  
K(Pd3A3CO+L)=3.99

Medium: MeOH. A=Bis(diphenylphosphino)methane

C8H9NOS HL CAS 4822-44-0 (3240)  
N-(Mercaptoacetyl)aniline (thioglycolanilide); C6H5.NH.CO.CH2.SH

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

Pd++ oth diox/w 30°C 70% U B2=24.34 1973BSa (60163) 434  
Medium: 0.1 M KCl

C8H9N03 HL CAS 5663-54-7 (1095)  
2,4-Dihydroxy-acetophenone oxime; (HO)2.C6H3.C(CH3):NOH

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

Pd++ gl diox/w 27°C 60% U I K1=8.99 B2=17.80 1974SRa (60400) 435  
\*\*\*\*\*

C8H9N04S H2L CAS 7717-21-7 (3846)  
N-(Phenylsulfonyl)aminoethanoic acid; C6H5SO2NHCH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	vlt	NaClO4	25°C	0.10M	U			K1=18.9    B2=24.4	1990GBb (60517)	436
*****										
C8H9N3O7		H2L		Uramildiacetic	CAS	13055-06-5	(185)			
5-Amino-2,4,6-trioxo-1,3-perhydrodiazimino-N,N-diethanoic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	KCl	20°C	0.10M	U	M			1987KUa (60652)	437
B(PdCl(OH)L)=22.12										
C8H9O3P		H2L			CAS	1707-08-0	(1969)			
2-Styrylphosphonic acid; C6H5.CH:CH.PO3H2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	0.12M	U			K1=3.33    B2=6.55	1979RZb (60673)	438
*****										
C8H10		L	p-Xylene		CAS	106-42-3	(2145)			
1,4-Dimethylbenzene, 4-Xylene; CH3.C6H4.CH3										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	M			1994PAa (60682)	439
K(Pd3A3CO+L)=-1.15										
Medium: MeOH. A=Bis(diphenylphosphino)methane										
*****										
C8H10N3OCl		HL			CAS	5756-79-6	(4578)			
3-Ethyl-3-hydroxy-1-(2-chlorophenyl)triazene;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	diox/w	25°C	70%	U			K1=10.49    B2=20.46	1968DSa (60784)	440
Medium: 70% dioxan, 0.1 M KCl										
*****										
C8H10N3OCl		HL			CAS	5756-78-5	(4579)			
3-Ethyl-3-hydroxy-1-(4-chlorophenyl)triazene;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	diox/w	25°C	70%	U			K1=10.68    B2=20.66	1968DSa (60789)	441
Medium: 70% dioxan, 0.1 M KCl										
*****										
C8H11N		L	DiMethylaniline	CAS	121-69-7	(1343)				
N-Phenyl-N,N-dimethylamine; C6H5.N(CH3)2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

Pd++ sp non-aq 25°C 100% U M 1979SSa (60989) 442  
 $K(PdA+L)=1.0$   
 A=Tetraphenylporphyrin (in its excited triplet state)  
 \*\*\*\*=  
 C8H11N30 HL CAS 5956-70-7 (4529)  
 3-Hydroxy-3-methyl-1-(4-tolyl)triazene; CH<sub>3</sub>.C<sub>6</sub>H<sub>4</sub>.N:N.N(OH).CH<sub>3</sub>  
 -----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Pd++ gl diox/w 25°C 70% U K1=11.77 B2=23.10 1970DSb (61244) 443  
 Medium: 70% dioxan, 0.1 M KCl  
 \*\*\*\*=  
 C8H11N302 HL CAS 5756-72-9 (4533)  
 3-Hydroxy-3-methyl-1-(4'-methoxyphenyl)triazene; CH<sub>3</sub>O.C<sub>6</sub>H<sub>4</sub>.N:N.N(OH).CH<sub>3</sub>  
 -----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Pd++ gl diox/w 25°C 70% U K1=12.25 B2=23.70 1970DSb (61257) 444  
 Medium: 70% dioxan, 0.1 M KCl  
 \*\*\*\*=  
 C8H11N303 HL CAS 2497-02-1 (3230)  
 Acetyl-L-histidine;  
 -----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Pd++ gl KN03 25°C 0.20M C M 2003NFa (61275) 445  
 $K(PdA+L)=8.47$   
 $K(PdA+H+L)=11.58$   
 $K(2PdA+L=(PdA)2H-1L+H)=6.99$   
 A is bis-((2-pyridyl)methyl)amine  
 -----  
 Pd++ gl KN03 25°C 0.20M C 1997WKa (61276) 446  
 $K(PdACl+L=PdAL+C1)=5.33$   
 $K(2PdACl+L=Pd2A2H-1L+2C1)=0.1$   
 PdA is [PdH-1(gly-Met)].  
 \*\*\*\*=  
 C8H14N405 HL Tetraglycine CAS 637-84-3 (1849)  
 Glycyl-Glycyl-Glycyl-Glycine; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.COOH  
 -----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Pd++ gl KN03 25°C 0.20M C 1999AJa (62024) 447  
 $B(PdLC1)=18.25$   
 $B(PdH-1LC1)=14.81$   
 $B(PdH-2L)=10.13$   
 $B(PdH-3L)=2.45$   
 Medium: 0.1 M KN03, 0.1 M KCl.  
 \*\*\*\*=  
 C8H14O5S2 H2L CAS 4408-66-6 (8332)  
 Oxybis(ethylenethio)diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	20°C	0.10M	U		K1=6.22		1977CAC (62135)	448
*****										
C8H15N02		HL					(4572)			
1-Azacycloheptane-1-ethanoic acid, hexamethyleneimine-ethanoic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	none	25°C	0.0	U		K1=10.48	B2=20.45	1974HFa (62159)	449
*****										
C8H15N304		HL					(1008)			
Glycyl- <i>b</i> -alanyl- <i>b</i> -alanine; H <sub>2</sub> NCH <sub>2</sub> CONH(CH <sub>2</sub> ) <sub>2</sub> CONH(CH <sub>2</sub> ) <sub>2</sub> COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	oth/un	25°C	0.20M	C		K1=16.66		2003AMB (62255)	450
							K(PdH-1L)=13.24			
							K(PdH-2L)=10.12			
Method: competition with chloride (0.1 M). Medium: 0.10 M KNO <sub>3</sub> /0.10 M KCl.										
*****										
C8H15N304		HL					(1009)			
<i>b</i> -Alanyl-glycyl- <i>b</i> -alanine; H <sub>2</sub> N(CH <sub>2</sub> ) <sub>2</sub> CONHCH <sub>2</sub> CONH(CH <sub>2</sub> ) <sub>2</sub> COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	oth/un	25°C	0.20M	C				2003AMB (62263)	451
							K(PdH-1L)=12.64			
							K(PdH-2L)=9.58			
Method: competition with chloride (0.1 M). Medium: 0.10 M KNO <sub>3</sub> /0.10 M KCl.										
*****										
C8H15N702S3		L	Famotidine		CAS	76824-35-6	(6502)			
N'-(Aminosulfonyl)-3-((2-(diaminomethyleneamino)-4-thiazolyl)methylthio)propanamide										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaCl	25°C	0.10M	U		K1=6.20	B2=12.69	1995CCa (62274)	452
							B(PdH-1L)=1.20			
							B(PdH-2L)=18.40			
							B(PdH-1L2)=6.23			
*****										
C8H16N203		HL	Gly-Leu		CAS	869-19-2	(255)			
Glycyl-leucine; H <sub>2</sub> N.CH <sub>2</sub> .CO.NH.CH(CH <sub>2</sub> .CH(CH <sub>3</sub> ) <sub>2</sub> ).COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M			1999SSd (62393)	453
							K(Pd(pn)+L)=7.73			

K(Pd(pn)+L=PdH-1(pn)L+H)=3.30

pn is 1,2-diaminopropane. For aminoacid protonation, K1=8.13.

---

C8H22N4                    L                    CAS 35513-90-7 (1545)  
 1,4,9,12-Tetraazadodecane; NH2.(CH2)2.NH.(CH2)4.NH.(CH2)2.NH2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO4	25°C	1.00M	C			K1=42.0	1985YAa (63383)	454

---

C9H6N04IS                    H2L                    Ferron                    CAS 547-91-1 (275)  
 7-Iodo-8-hydroxyquinoline-5-sulfonic acid; (HO)(HO3S)C9H4NI

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	25°C	0.0	U				1967MBe (63822)	455

K(?)=9.05

---

C9H7N04S                    H2L                    Sulfoxine                    CAS 84-88-8 (448)  
 8-Hydroxyquinoline-5-sulfonic acid;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	oth	oth/un	?	?	U			K1=11.6      B2=20.14	1973B1b (64573)	456

Method: fluorescence

---

C9H11NOS                    HL                    CAS 36076-50-3 (4680)  
 N-Phenyl-N-methyl-2-mercaptoproacetamide; HS.CH2.CO.N(CH3).C6H5

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	oth	diox/w	30°C	70%	U			K1=9.87      B2=18.84	1973BSc (65682)	457

---

C9H11N02                    HL                    Phenylalanine                    CAS 63-91-2 (2)  
 2-Amino-3-phenylpropanoic acid; H2N.CH(CH2.C6H5)COOH

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	0.50M	U				1978LIa (65966)	458

K(Pd(en)+L)=10.86

---

Pd++                    gl                    KNO3                    20°C    0.5M    U                    K1=9.32    B2=18.27    1974KHb (65967) 459

---

C9H11N02                    HL                    B-Phenylalanine                    CAS 614-19-7 (187)  
 3-Amino-3-phenyl-propanoic acid; H2N.CH(C6H5).CH2.COOH

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaNO3	25°C	0.10M	U	M			1999SSd (66011)	460

K(Pd(pn)+L)=11.06

pn is 1,2-diaminopropane. For aminoacid protonation, K1=9.12, B2=11.01.

\*\*\*\*\*  
C9H11N04S H2L CAS 1080-44-0 (4682)  
N-(4-Toluenesulfonyl)glycine, N-tosylglycine; CH<sub>3</sub>.C<sub>6</sub>H<sub>4</sub>.SO<sub>2</sub>.NH.CH<sub>2</sub>.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ vlt NaClO<sub>4</sub> 25°C 0.10M U 1994BGa (66427) 461  
Keff(Pd+H<sub>2</sub>L=PdL)=19.9  
Beff(Pd+2H<sub>2</sub>L=PdL<sub>2</sub>)=23.3

Complex formation involves loss of the amide proton.

-----  
Pd++ vlt NaClO<sub>4</sub> 25°C 0.10M U K1=17.8 B2=23.4 1990GBb (66428) 462  
\*\*\*\*\*

C9H11N04S H2L (6960)  
N-(Phenylsulfonyl)-2-aminopropanoic acid; C<sub>6</sub>H<sub>5</sub>.SO<sub>2</sub>.NH.CH(CH<sub>3</sub>).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ vlt NaClO<sub>4</sub> 25°C 0.10M U 1994BGa (66429) 463  
Keff(Pd+H<sub>2</sub>L=PdL)=20.6  
Beff(Pd+2H<sub>2</sub>L=PdL<sub>2</sub>)=23.0

Complex formation involves loss of the amide proton.

\*\*\*\*\*  
C9H11N04S H2L (6961)  
N-(Phenylsulfonyl)-3-aminopropanoic acid; C<sub>6</sub>H<sub>5</sub>.SO<sub>2</sub>.NH.CH<sub>2</sub>.CH<sub>2</sub>.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ vlt NaClO<sub>4</sub> 25°C 0.10M U 1994BGa (66430) 464  
Keff(Pd+H<sub>2</sub>L=PdL)=17.1  
Beff(Pd+2H<sub>2</sub>L=PdL<sub>2</sub>)=20.8

Complex formation involves loss of the amide proton.

\*\*\*\*\*  
C9H12N206 HL Uridine CAS 58-96-8 (828)  
Uracil-1-beta-D-ribofuranoside;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl KN03 25°C 0.20M C M 2003NFa (66703) 465  
K(PdA+L)=8.90

A is bis-((2-pyridyl)methyl)amine

-----  
Pd++ gl NaNO<sub>3</sub> 25°C 0.10M C M 2002MSb (66704) 466  
K(PdA+L)=8.70  
K(PdA+2L)=14.37  
K(PdA+H+L)=15.17

A is N,N'-dimethylethylenediamine.

-----  
Pd++ gl KN03 25°C 0.20M C M 2001NSa (66705) 467

						K(Pd(en)+L)=8.98 K(Pd(en)+2L)=14.80 *K(Pd(en)(H <sub>2</sub> O)L)=-7.67
K(Pd(en)(H <sub>2</sub> O)+L=Pd(en)(OH)L+H)=1.31, K(2Pd(en)(H <sub>2</sub> O)2+2L=Pd <sub>2</sub> (en) <sub>2</sub> (OH)L <sub>2</sub> +H)=12.14						
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C M	2001NSa (66706) 468 K(Pd(pic)+L)=9.20 K(Pd(pic)+2L)=15.09 *K(Pd(pic)(H <sub>2</sub> O)L)=-7.94
K(Pd(pic)(H <sub>2</sub> O)+L=Pd(pic)(OH)L+H)=1.26, K(2Pd(pic)(H <sub>2</sub> O)2+2L=Pd <sub>2</sub> (pic) <sub>2</sub> (OH)L <sub>2</sub> +H)=13.82. Hpic=picric acid.						
Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C M	2001SHc (66707) 469 K(Pd(bpy)(H <sub>2</sub> O)2+L)=9.71 K(Pd(bpy)(H <sub>2</sub> O)2+H+L)=13.29 K(Pd(bpy)(H <sub>2</sub> O)2+2L)=16.88 K(Pd(bpy)(H <sub>2</sub> O)2+2L+H)=22.65
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	K1=7.42 2000NFa (66708) 470
Pd++	gl	KCl	25°C	0.20M	U M	1997KFa (66709) 471 K(Pd(dien)Cl+L)=7.42 K(Pd(terpy)Cl+L)=7.56
dien=diethylentriamine, terpy=2,2'-6',2"-terpyridine. Data also for many related nucleobases						
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C	1997WKa (66710) 472 K(PdACl+L=PdAL+Cl)=7.00
PdA is [PdH-1(gly-met)].						
Pd++	gl	KNO <sub>3</sub>	25°C	0.50M	U M	1981LIa (66711) 473 K(Pd(en)(H <sub>2</sub> O)2+L)=8.65 K(Pd(en)(H <sub>2</sub> O)L+L)=5.92 K(Pd(dien)(H <sub>2</sub> O)+L)=8.08
C9H13N2O9P H <sub>3</sub> L UMP-5						CAS 58-97-9 (2948)
Uridine-5'-monophosphoric acid;						
Metal	Mtd	Medium	Temp	Conc	Cal Flags Lg K values	Reference ExptNo
Pd++	nmr	oth/un	23°C	0.30M	U M	1985PGa (66980) 474 Keff(PdA+HL)=2.99
A=Tetrakis(4-N-methylpyridyl)porphyrin.						pD=7.0
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

Pd++      gl    KN03    25°C  0.20M C      M      2003NFa (67073) 475  
 $K(PdA+L)=5.83$

A is bis-((2-pyridyl)methyl)amine

Pd++ sp NaClO<sub>4</sub> 25°C 1.0M U M 1984ETa (67074) 476  
 $K(PdCl_4 + L \rightleftharpoons PdLCl_3 + Cl) = 4.49$   
 $K(PdLCl_3 + L \rightleftharpoons PdL_2Cl_2 + Cl) = 3.45$   
 $K(Pd(en)Cl_2 + L \rightleftharpoons PdenLCl + Cl) = 3.32$   
 $K(Pd(en)LCl + L \rightleftharpoons PdenL_2 + Cl) = 2.56$

\*\*\*\*\*

C9H14N3O8P H2L CMP-5 CAS 63-37-6 (1243)

Cytidine-5'-monophosphoric acid, Cytidilic acid;

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

Pd++ g1 KNO<sub>3</sub> 25°C 0.10M C M K1=3.35 2001AAa (67262) 477  
 Also data for ternary complexes with MOPSO, TAPSO and ACES.

\*\*\*\*\*

C9H17N3O4S                    HL            Gly-Met-Gly            CAS 51529-34-1 (7566)

Glycylmethionylglycine; NH<sub>2</sub>CH<sub>2</sub>CONHCH(CH<sub>2</sub>CH<sub>2</sub>SCH<sub>3</sub>)CONHCH<sub>2</sub>COOH

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

$$K(PdH-1L+L)=4.71, \quad K(PdH-1L+g1vg1v)=4.50, \quad K(PdH-1L+L=PdH-2L2+H)=-4.99.$$

\*\*\*\*\*

C9H18N2O3      HL      Leu-Ala      CAS 7298-84-2 (4659)

Leucylalanine- H<sub>2</sub>N.CH(CH<sub>2</sub>.CH(CH<sub>3</sub>)<sub>2</sub>).CO.NH.CH(CH<sub>3</sub>).COOH

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

Pd++      g]    NaNO<sub>3</sub>    25°C    0-10M    U      M      1999SSd (67912) 479

$$K(Pd(pp)+l)=8 \cdot 19$$

K(Pd(pp)+I-PdH-1(pp)I+H)-3, 74

pp is 1,2-diaminopropane. For aminoacid protonation,  $K_1=8\text{--}13$ .

\*\*\*\*\*  
pH 13 1,2-diaminopropane: for aminoacid precipitation, K-1313.

C9H23N3      |      CAS 3030-47-5 (4605)

**59-12-3** [1-(*N,N,N',N'',N'''*-Pentamethyl-diethylenetriamine)-(*CH<sub>3</sub>*)<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>]CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub> [47-35-3] (4083)

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

Pd: 1 g/L PdN X = 25°C, 0.1M C = M = 1008Pa (6828) 180

Pd++ g1 R4N.X 25°C 0.10M C M 1998Bba (68282) 480  
 P(D1G1), 24.0

$$B(PdH-1L) = 14.1$$

Medium: 0.1 M NMe4Cl

-----

Pd++ gl NaClO<sub>4</sub> 25°C 0.50M C I 1981GMF (68283) 481

K(PdL=PdLOH+H)=-7.293

K(PdL+PdLOH)=1.08

In 0.5 NaNO<sub>3</sub>, K(PdL=PdLOH+H)=-7.241, K(PdL+PdLOH)=0.70

\*\*\*\*\*

C9H24N4 L CAS 129880-56-4 (1533)

1,4,10,13-Tetraazatridecane; H<sub>2</sub>N.(CH<sub>2</sub>)<sub>2</sub>.NH.(CH<sub>2</sub>)<sub>5</sub>.NH.(CH<sub>2</sub>)<sub>2</sub>.NH<sub>2</sub>

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

Pd++ gl KN03 25°C 0.10M C K1=37.9 1985YAa (68336) 482

\*\*\*\*\*

C10H7N02 HL CAS 131-91-9 (2668)

1-Nitroso-2-naphthol, alpha-Nitroso-beta-naphthol;

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

Pd++ gl alc/w RT 40% M K1=5.53 B2= 8.86 1993RAb (68585) 483

Medium: 40% v/v EtOH/H<sub>2</sub>O, 0.1 M NaClO<sub>4</sub>.

\*\*\*\*\*

C10H7N02 HL CAS 132-53-6 (2524)

2-Nitroso-1-naphthol;

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

Pd++ gl alc/w RT 40% M K1=4.46 B2= 8.92 1993RAb (68653) 484

Medium: 40% v/v EtOH/H<sub>2</sub>O, 0.1 M NaClO<sub>4</sub>.

\*\*\*\*\*

C10H7N05S 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

Pd++ gl oth/un RT 0.10M M K1=4.46 B2= 8.68 1993RAb (68892) 485

Medium not stated.

\*\*\*\*\*

C10H7N08S2 H3L Nitroso-R acid CAS 525-05-3 (1811)

1-Nitroso-2-hydroxynaphthalene-3,6-disulfonic acid;

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

Pd++ sp NaClO<sub>4</sub> 25°C 0.10M U 1964MSa (69024) 486

K(?)=8.9

Pd++ sp oth/un 25°C ? U 1963BGb (69025) 487

K(?)=8.8

\*\*\*\*\*

C10H8N2 L 2,2'-Bipyridyl CAS 366-18-7 (25)

2,2'-Bipyridine; (C<sub>5</sub>H<sub>4</sub>N)<sub>2</sub>



$$K(PdA+2L)=10.27$$

HA is S-methyl cysteine.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M	2002MSb (71393) 494
							K(PdA+L)=8.03
							K(PdA+2L)=12.74
							K(PdA+B+L)=12.29
							K(PdA+H+B+L)=17.72

A is N,N'-dimethylethylenediamine, B is 1,1-cyclobutanedicarboxylic acid.

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M	2001SHc (71394) 495
							K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +L)=9.73
							K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +H+L)=12.55
							K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +2L)=14.89
							K(Pd(bpy)(H <sub>2</sub> O) <sub>2</sub> +2L+H)=20.11

$$K(Pd(bpy)(H<sub>2</sub>O)<sub>2</sub>+2L+2H)=25.37.$$

Pd++	gl	NaNO <sub>3</sub>	25°C	0.10M	U	M	1999SSd (71395) 496
							K(Pd(pn)+L)=6.83
							K(Pd(pn)+2L)=11.26

pn is 1,2-diaminopropane. For nucleotide protonation, K<sub>1</sub>=8.55.

Pd++	gl	NaNO <sub>3</sub>	37°C	0.16M	M	M	1998ESa (71396) 497
							K(PdA+L)=6.92
							K(PdA+2L)=11.58

A is 1,3-diaminopropane.

Pd++	gl	KCl	25°C	0.20M	U	M	1997KFa (71397) 498
							K(Pd(dien)Cl+L)=6.82
							K(Pd(dien)Cl+H+L)=12.79
							K(2Pd(dien)Cl+L)=11.56
							K(Pd(terpy)Cl+L)=6.92

dien=diethylentriamine, terpy=2,2'-6',2"-terpyridine.  $K(Pd(terpy)+H+L)=12.10$   
Data also for many related nucleobases

Pd++	gl	NaClO <sub>4</sub>	25°C	0.10M	C	M	1997RSa (71398) 499
							K(PdA+L)=7.43
							K(PdA+2L)=11.77

A=2-(Aminomethyl)pyridine

Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C		1997WKa (71399) 500
							K(PdACl+L=PdAL+C1)=6.38
							K(PdACl+H+L=PdAHL+C1)=12.73
							K(2PdACl+L=Pd2A2L+2C1)=10.93

PdA is [PdH-1(gly-Met)].

Pd++	gl	NaClO <sub>4</sub>	25°C	0.10M	M	T	H	1996SEc (71400) 501
								K(PdACl <sub>2</sub> +L)=6.04
								K(PdACl <sub>2</sub> +2L)=9.56

A is N,N,N',N"-tetramethyl-1,2-diaminoethane. Also data at 15.5, 20, 30

and 35.2 C.  $DH(PdAC12+L)=17.0 \text{ kJ mol}^{-1}$ ,  $DH(PdAC12+2L)=-10.7$ .

Pd++ gl NaClO<sub>4</sub> 25°C 0.10M M T H 1996SEc (71401) 502  
K(PdAC12+L)=5.78  
K(PdAC12+2L)=10.48

A is N,N,N',N'-tetraethyl-1,2-diaminoethane. Also data at 15.5, 20, 30 and 35.2 C.  $DH(PdAC12+L)=30.6 \text{ kJ mol}^{-1}$ ,  $DH(PdAC12+2L)=35.6$ .

C10H12N6S L CAS 91262-80-9 (6101)  
3-(4',5'-Dimethyl-2'-thiazolylazo)-2,6-diaminopyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	NaClO <sub>4</sub>	25°C	0.25M	U				1988SSe (71519)	503
								B(PdHL)=16.36		
								B(PdH3L2)=31.47		
								B(PdH4L2)=27.36		

C10H13N04S H2L N-Tosylalanine (1584)  
N-(4-Toluenesulfonyl)-3-aminopropanoic acid; CH<sub>3</sub>.C<sub>6</sub>H<sub>4</sub>.SO<sub>2</sub>.NH.CH<sub>2</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	vlt	NaClO <sub>4</sub>	25°C	0.10M	U				1994BGa (71773)	504
								Keff(Pd+H2L=PdL)=16.8		
								Beff(Pd+2H2L=PdL2)=20.5		

Complex formation involves loss of the amide proton.

C10H13N3OS L (4791)  
alpha-Ethylfurylacrolein thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	20°C	50%	U			B2=12.68	1972KLa (71797)	505
Medium:	50% EtOH, 0.1 M, pH=5									

C10H13N4O8P H3L IMP CAS 131-99-7 (843)  
Inosine-5'-monophosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO <sub>4</sub>	25°C	0.10M	M	M			2002BSa (71862)	506
								K(PdA+L)=7.45		
								K(PdA+H+L)=14.10		

HA is S-methyl cysteine.

Pd++ gl KNO<sub>3</sub> 25°C 0.10M C M K1=3.27 2001AAa (71863) 507  
Also data for ternary complexes with MOPS, TAPSO and ACES.

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M C M 2001SHc (71864) 508

$K(Pd(bpy)(H_2O)_2+L)=10.17$   
 $K(Pd(bpy)(H_2O)_2+H+L)=16.65$   
 $K(Pd(bpy)(H_2O)_2+L+2H)=20.98$   
 $K(Pd(bpy)(H_2O)_2+2L)=14.80$   
 $K(Pd(bpy)(H_2O)_2+2L+H)=21.49$ ,  $K(Pd(bpy)(H_2O)_2+2L+2H)=28.50$ .

---

Pd++ gl NaNO<sub>3</sub> 25°C 0.10M U M 1999SSd (71865) 509  
 $K(Pd(pn)+L)=8.13$   
 $K(Pd(pn)+2L)=11.92$   
 $K(Pd(pn)+H+L)=14.03$

pn is 1,2-diaminopropane. For nucleotide protonation,  $K_1=8.67$ ,  $B_2=14.63$ .

---

Pd++ gl NaNO<sub>3</sub> 37°C 0.16M M M 1998ESa (71866) 510  
 $K(PdA+L)=9.82$   
 $K(PdA+2L)=14.82$   
 $K(PdA+H+L)=15.14$

A is 1,3-diaminopropane.

---

Pd++ gl NaClO<sub>4</sub> 25°C 0.10M C M 1997RSa (71867) 511  
 $K(PdA+L)=10.79$   
 $K(PdA+H+L)=17.02$   
 $K(PdA+2L)=14.65$

A=2-(Aminomethyl)pyridine

---

Pd++ gl NaClO<sub>4</sub> 25°C 0.10M M T H 1996SEc (71868) 512  
 $K(PdACl_2+L)=4.43$   
 $K(PdACl_2+2L)=9.20$

A is N,N,N',N'-tetramethyl-1,2-diaminoethane. Also data at 15, 20, 30 and 35 C.  $DH(PdACl_2+L)=-73.1$  kJ mol<sup>-1</sup>,  $DH(PdACl_2+2L)=-62.4$ .

---

Pd++ gl NaClO<sub>4</sub> 25°C 0.10M M T H 1996SEc (71869) 513  
 $K(PdACl_2+L)=4.39$   
 $K(PdACl_2+2L)=9.73$

A is N,N,N',N'-tetraethyl-1,2-diaminoethane. Also data at 15, 20, 30 and 35 C.  $DH(PdACl_2+L)=-88.6$  kJ mol<sup>-1</sup>,  $DH(PdACl_2+2L)=-2.09$ .

---

Pd++ sp NaClO<sub>4</sub> 25°C 0.10M U M 1994SEa (71870) 514  
 $K(PdACl+L=PdALCl)=-1.46$

A=N,N,N',N'-Tetramethylethylenediamine

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\*\*\*\*\*

C10H13N5O5 HL Guanosine CAS 118-00-3 (1402)  
 2-Aminopurin-6-one-9-riboside;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ gl NaNO<sub>3</sub> 37°C 0.16M M M 1998ESa (72015) 515  
 $K(PdA+L)=7.85$

A is 1,3-diaminopropane.

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C10H14N2O5 H2L Thymidine CAS 50-89-5 (8256)

## Thymine deoxyriboside, 1-(2-Deoxy-beta-ribofuranosyl)-5-methyluracil;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	g1	NaNO <sub>3</sub>	25°C	0.10M	C	M			2002MSb (72085)	516
								$K(PdA+L)=8.75$		
								$K(PdA+2L)=14.53$		
								$K(PdA+B+L)=16.26$		

A is N,N'-dimethylethylenediamine, B is 1,1-cyclobutanedicarboxylic acid.

Pd++ g1 NaNO<sub>3</sub> 25°C 0.10M U M 1999SSd (72086) 517  
 $K(Pd(pn)+L)=8.92$   
 $K(Pd(pn)+2L)=14.84$

pn is 1,2-diaminopropane. For nucleotide protonation, K1=9.54.

Pd++      gl    NaNO<sub>3</sub>    37°C    0.16M    M      M      1998ESa (72087) 518  
 $K(PdA+L)=8.27$   
 $K(PdA+2L)=13.57$

A is 1,3-diaminopropane.

\*\*\*\*\*

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
Pd++	g1	NaNO <sub>3</sub>	20°C	1.0M	M			K1=8.15 K3=6.37 K4=3.56	1997WYa (72106)	519

Pd++ g1 KNO<sub>3</sub> 25°C 0.50M U M 1981Lia (72107) 520  
 $K(Pd(en)(H_2O)_2+L)=8.84$   
 $K(Pd(en)(H_2O)L+L)=5.85$   
 $K(Pd(dien)(H_2O)+L)=8.31$

C10H14N3 | CAS 29198-32-1 (6921)

4-Diazo-N,N-diethylaniline: N:N,C6H4,N(C2H5)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	M			1994PAa (72122)	521
								$K(Pd3A3CO+L) = 2.30$		

Medium: MeOH. A=Bis(diphenylphosphino)methane

\*\*\*\*\*

C10H14N5O7P H2L AMP-2 CAS 81012-86-4 (2437)

Adenosine-2'-monophosphoric acid, 2-Adenylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.10M	C	M			2002WBa (72190)	522
								$K(Pd(dien)+H+L)=11.1$		

$$K(Pd(dien)+L)=5.30$$

$$K(2Pd(dien)+H+L)=13.5$$

\*\*\*\*\*

C10H14N5O8P H3L GMP-2 CAS 130-50-7 (8778)  
Guanosine-2'-monophosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KN03	25°C	0.10M	C	M		2002WBa (72525) 523		
								K(Pd(dien)+2H+L)=20.82		
								K(Pd(dien)+H+L)=15.40		
								K(Pd(dien)+L)=7.50		
								K(2Pd(dien)+H+L)=19.45		

K(2Pd(dien)+L)=13.70, K(3Pd(dien)+L)=16.59.

Pd++	gl	KN03	25°C	0.10M	C	M		2002WBa (72526) 524		
								K(Pd(en)+4H+2L)=39.57		
								K(Pd(en)+2H+2L)=28.4		
								K(Pd(en)+2L)=13.52		
								K(Pd(en)+H+L)=15.98		

K(Pd(en)+L)=9.54

\*\*\*\*\*

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
Pd++	gl	NaCl04	25°C	0.10M	M	M		2002BSa (72593) 525		
								K(PdA+L)=11.96		
								K(PdA+H+L)=18.75		
								K(PdA+2H+L)=22.00		

HA is S-methyl cysteine.

Pd++	gl	KN03	25°C	0.10M	C	M		2002WBa (72594) 526		
								K(Pd(en)+4H+2L)=40.96		
								K(Pd(en)+2H+2L)=28.8		
								K(Pd(en)+2L)=11.7		
								K(Pd(en)+H+L)=16.37		

K(Pd(en)+L)=9.83.

Pd++ gl KN03 25°C 0.10M C M K1=3.60 2001AAa (72595) 527  
Also data for ternary complexes with MOPSO, TAPSO and ACES.

Pd++	gl	NaCl04	25°C	0.10M	C	M		1997RSa (72596) 528		
								K(PdA+L)=10.82		
								K(PdA+H+L)=17.35		
								K(PdA+2L)=14.46		

A=2-(Aminomethyl)pyridine

Pd++ gl NaCl04 25°C 0.10M M T H 1996SEc (72597) 529

					K(PdACl2+HL)=4.14 K(PdACl2+2HL)=8.03
A is N,N,N',N'-tetramethyl-1,2-diaminoethane. Also data at 15, 20, 30 and 35 C. DH(PdACl2+HL)=-11.8 kJ mol-1, DH(PdACl2+2HL)=-14.8.					
Pd++	gl	NaClO4	25°C	0.10M	M T H      1996SEc (72598) 530 K(PdACl2+HL)=4.00 K(PdACl2+2HL)=7.14
A is N,N,N',N'-tetraethyl-1,2-diaminoethane. Also data at 15, 20, 30 and 35 C. DH(PdACl2+HL)=-76.2 kJ mol-1, DH(PdACl2+2HL)=-111. *****					
C10H15N5O4	HL	Gly-Gly-His	CAS	93404-95-6 (74)	
Glycyl-glycyl-histidine; H2N.CH2.CO.NH.CH2.CO.NH.CH(CH2.C3H3N2).COOH					
Metal	Mtd	Medium	Temp	Conc	Cal Flags Lg K values      Reference ExptNo
Pd++	gl	KCl	25°C	0.20M	C      1997BCb (72800) 531 *K(PdH-4L)=-11.30
*K corresponds to deprotonation of coordinated -NH2. *****					
C10H15N5O10P2	H3L	ADP	CAS	20398-34-9 (2181)	
Adenosine-5'-diphosphoric acid;					
Metal	Mtd	Medium	Temp	Conc	Cal Flags Lg K values      Reference ExptNo
Pd++	nmr	oth/un	23°C	0.30M	U      M      1985PGa (73011) 532 Keff(PdA+L)=4.08
A=Tetrakis(4-N-methylpyridyl)porphyrin. pD=7.0 *****					
C10H16N2O8	H4L	EDDS	CAS	52759-67-8 (1100)	
1,2-Diaminoethane-N,N'-di-1,4-butanedioic acid; (CH2.NH.CH(COOH)CH2.COOH)2					
Metal	Mtd	Medium	Temp	Conc	Cal Flags Lg K values      Reference ExptNo
Pd++	sp	NaClO4	20°C	0.10M	U      M      1986PKa (73171) 533 K(PdCl+H2L)=10.93 K(PdCl+L)=23.67
Pd++	gl	KNO3	30°C	0.10M	U      K1=13.6      1971STc (73172) 534 *****
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
Pd++	sp	NaClO4	21°C	0.20M	U      M      K1=25.6      1983KDa (74071) 535 K(PdL+C1)=5.4
Pd++	sp	NaClO4	25°C	1.00M	U      M      1981SDa (74072) 536 K(PdL+C1)=2.26

$K(PdL+Br)=2.40$   
 $K(PdL+I)=2.60$   
 $K(PdL+SCN)=3.30$   
 $K(PdL+OH)=4.41$     $K(PdL+NH_3)=4.84$     $K(PdL+S_2O_3)=4.66$     $K(PdL+thiocarbamate)=4.00$

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Pd++      sp    none    25°C    0.0    U      K1=26.4      1978KRa (74073) 537

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Pd++      gl    oth/un    20°C    1.00M    U    I    M      K1=24.5      1976AMa (74074) 538  
 $K(PdL+H)=3.01$   
 $K(PdHL+H)=3.21$   
 $K(PdH2L+H)=0.09$

Medium: NaBr/NaClO4. By exchange with PdBr4

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Pd++      oth    NaClO4    25°C    0.20M    U      K1=18.5      1955MKa (74075) 539

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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
Pd++	gl	NaCl	25°C	0.10M	U			K1=7.63    B2=15.13 B(PdH-1L)=0.52 B(PdH-2L)=-10.95 B(PdH-1L2)=7.87 B(PdH-2L2)=-1.18	1995CCa (74912)	540

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C10H26N4                    L                            CAS 66475-54-5 (5756)  
3,10-Diazadodecane-1,12-diamine; NH2.CH2.CH2.NH.(CH2)6.NH.CH2.CH2.NH2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	0.10M	C	I    M		K1=38.14	1985YAa (76766)	541

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C10H28N2012P4                H8L                            CAS 23605-74-5 (435)  
(Hexamethylenedinitrilo)tetra(methylenephosphonic acid);  
(CH2.CH2.CH2.N(CH2.PO3H2)2)2

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	0.10M	U			K1=10.83 K(PdL+H)=9.56 K(PdHL+H)=6.71 K(PdH2L+H)=5.73 K(PdH3L+H)=4.65	1980ZRb (76841)	542

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C11H7N04                    H2L                            CAS 122844-38-6 (8293)  
1-Hydroxy-4-nitroso-2-naphthalenecarboxylic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ gl alc/w RT 40% M K1=4.95 B2= 8.72 1993RAb (76893) 543  
Medium: 40% v/v EtOH/H<sub>2</sub>O, 0.1 M NaClO<sub>4</sub>.

\*\*\*\*\*

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  
-----  
Pd++ gl alc/w RT 40% M K1=3.89 B2= 7.86 1993RAb (76901) 544  
Medium: 40% v/v EtOH/H<sub>2</sub>O, 0.1 M NaClO<sub>4</sub>.

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C11H803 H2L CAS 86-48-6 (1129)

1-Hydroxy-2-naphthoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl alc/w RT 40% M K1=6.88 B2=13.31 1993RAb (77015) 545  
Medium: 40% v/v EtOH/H<sub>2</sub>O, 0.1 M NaClO<sub>4</sub>.

\*\*\*\*\*

C11H803 H2L CAS 92-70-6 (1130)

2-Hydroxy-3-naphthoic acid (3-Hydroxy-2-naphthoic acid);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl alc/w RT 40% M K1=11.84 B2=17.04 1993RAb (77128) 546  
Medium: 40% v/v EtOH/H<sub>2</sub>O, 0.1 M NaClO<sub>4</sub>.

\*\*\*\*\*

C11H9N02S HL CAS 29556-13-6 (1450)

N-Phenyl-2-thenoylhydroxamic acid; C<sub>4</sub>H<sub>3</sub>SCON(C<sub>6</sub>H<sub>5</sub>)OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl diox/w 25°C 50% M T H K1=9.22 B2=16.97 1977ABb (77351) 547  
50% v/v dioxan - water; Data also for complexes with Cu(II), Zn, Ni, Co, Mn

\*\*\*\*\*

C11H9N03 H2L CAS 80690-05-7 (872)

3-Hydroxy-2-methyl-1,4-naphthoquinone monoxime;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl diox/w 30°C 0.10M U K1=5.63 B2=10.22 1981KSa (77365) 548  
K3=4.61

\*\*\*\*\*

C11H9N30 HL CAS 10335-29-2 (3937)

2-(2'-Pyridylazo)phenol; C<sub>5</sub>H<sub>4</sub>N.N:N.C<sub>6</sub>H<sub>4</sub>.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sp alc/w 20°C 50% U K1=17.1 1967ANa (77461) 549  
Medium: 50% MeOH, 0.1 M NaClO<sub>4</sub>

\*\*\*\*\*

C11H10N4 L PAPHY CAS 2215-33-0 (1305)  
Pyridine-2-aldehyde-2'-pyridyl-hydrazone; C5H4N.CH:N.NH.C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaCl	25°C	3.00M	U	M			1981MIb (77710)	550
								K(PdCl <sub>2</sub> +HL=PdHCl <sub>1</sub> +Cl)=4.00		
								K(PdLC <sub>1</sub> +H)=5.30		
								K(PdCl <sub>2</sub> +2PdLC <sub>1</sub> =Pd <sub>3</sub> L <sub>2</sub> Cl <sub>4</sub> )=8.30		

\*\*\*\*\*

C11H12N20 L Antipyrine CAS 60-80-0 (2026)  
2,3-Dimethyl-1-phenyl-3-pyrazolin-5-one, Phenazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	?	0.60M	U			K1=5.58	1971KBe (78005)	551

Medium: K<sub>2</sub>SO<sub>4</sub>

\*\*\*\*\*

C11H12N202 HL Tryptophan CAS 73-22-3 (3)  
2-Amino-3-(3-indolyl)propanoic acid; H<sub>2</sub>N.CH(CH<sub>2</sub>.C<sub>8</sub>H<sub>6</sub>N).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.50M	U				1978LJa (78230)	552
								K(Pd(en)+L)=10.83		

\*\*\*\*\*

C11H14N203 HL Gly-Phe CAS 3321-03-7 (829)  
Glycyl-phenylalanine; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH.CH(CH<sub>2</sub>.C<sub>6</sub>H<sub>5</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C				1999AJa (78815)	553
								B(PdLC <sub>1</sub> )=17.94		
								B(PdH-1LC <sub>1</sub> )=16.09		
								B(PdH-2L)=5.30		
								B(PdH-1L2)=20.10		

Medium: 0.1 M KNO<sub>3</sub>, 0.1 M KCl. B(PdH-1L)=14.10.

\*\*\*\*\*

C11H14N203 HL Phe-Gly CAS 721-90-4 (830)  
Phenylalanyl-glycine; H<sub>2</sub>N.CH(CH<sub>2</sub>.C<sub>6</sub>H<sub>5</sub>).CO.NH.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO <sub>3</sub>	25°C	0.20M	C				1999AJa (78828)	554
								B(PdLC <sub>1</sub> )=17.58		
								B(PdH-1LC <sub>1</sub> )=15.20		
								B(PdH-2L)=4.50		
								B(PdH-1L2)=19.20		

Medium: 0.1 M KNO<sub>3</sub>, 0.1 M KCl. B(PdH-1L)=13.2; B(PdH-2L)=13.70.

\*\*\*\*\*

C11H18N208 H4L CAS 4408-81-5 (923)  
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.)2.CH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ gl oth/un 20°C 1.00M C K1=28.8 1976AMa (79465) 555

Medium: NaBr/NaClO4. By exchange with PdBr4

\*\*\*\*\*

C11H20N2 L (6343)  
3,5-Dipropyl-4-ethylpyrazole

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

Pd++ nmr non-aq 32°C 100% U 1987FKa (79696) 556  
K(PdCl2+2L)=6.7

Medium: Deuterated DMSO (D6). With N-methyl analogue: K(PdCl2+2L)=9.6;  
N-benzyl: K=7.9; N-allyl: K=10.8

\*\*\*\*\*

C12H8N2 L Phenanthroline CAS 66-71-7 (144)  
1,10-Phenanthroline;

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

Pd++ sp none 25°C 0.0 C K2=9.4 1975PJb (80508) 557  
\*K(PdL)=-3.3  
\*K(Pd(OH)L)=-5.9  
\*K(Pd(OH)2L)=-9.6

\*\*\*\*\*

C12H10N205S H3L Tropeolin O CAS 547-57-9 (1090)  
Chrysoin; HS03.C6H4.N:N.C6H3(OH)2

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

Pd++ sp oth/un 25°C ? U 1963SDd (80738) 558  
K(Pd+2HL)=9.4(?)

\*\*\*\*\*

C12H10N30Br HL CAS 5756-88-7 (4001)  
1-(4'-Bromophenyl)-3-hydroxy-3-phenyltriazene;

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

Pd++ gl diox/w 25°C 70% U K1=10.86 B2=21.30 1965PSd (80754) 559  
Medium: 70% dioxan, 0.1 M KCl

\*\*\*\*\*

C12H10N30Cl HL CAS 52756-05-6 (3998)  
1-(2'-Chlorophenyl)-3-hydroxy-3-phenyltriazene;

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

Pd++ gl diox/w 25°C 70% U K1=10.43 B2=20.43 1964PSg (80761) 560

Medium: 70% dioxan, 0.1 M KCl

\*\*\*\*\*

C12H10N3OCl HL CAS 5756-86-5 (3999)

1-(4'-Chlorophenyl)-3-hydroxy-3-phenyltriazene;

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

Pd++ gl diox/w 25°C 70% U K1=10.70 B2=20.95 1964PSb (80767) 561

Medium: 70% dioxan, 0.1 M KCl

\*\*\*\*\*

C12H11N3O4S H2L (4003)

3-Hydroxy-3-phenyl-1-(4'-sulfonyl)triazene;

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

Pd++ gl diox/w 25°C 70% U K1=9.71 B2=19.03 1964PSf (80942) 562

Medium: 70% dioxan, 0.1 M KCl

Pd++ sp oth/un 25°C ? U 1958DSa (80943) 563

K(?)=11.52

Acetate buffer

\*\*\*\*\*

C12H12N2S2 HL CAS 1141-88-4 (7739)

2,2'-Dithiodianiline, 2,2'-Diaminodiphenyl disulfide;

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

Pd++ sp none C K1=6.17 2000GNa (81110) 564

\*\*\*\*\*

C12H13N3 L CAS 1539-42-0 (932)

bis-((2-Pyridyl)methyl)-amine (Di-2-picolyamine); C5H4N.CH2NHCH2.C5H4N

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

Pd++ gl KN03 25°C 0.20M C 2003NFa (81289) 565

\*K(PdL(H2O))=-7.08

\*\*\*\*\*

C12H20N2O8 H4L CAS 40623-42-5 (1101)

1,2-Diaminoethane-N,N'-di(2-pentane-1,5-dioic acid); (CH2NHCH(COOH)CH2CH2COOH)2

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

Pd++ gl KN03 30°C 0.10M U K1=13.4 1971STc (82091) 566

\*\*\*\*\*

C12H20N2O8 H4L CAS 2458-58-4 (922)

1,4-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.(CH2)4.N(CH2.COOH)2

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

Pd++ gl oth/un 20°C 1.00M C K1=25.8 1976AMa (82233) 567  
 Medium: NaBr/NaClO4. By exchange with PdBr4  
 \*\*\*\*

C12H2402S4 L (6657)  
 1,4,7,10-Tetrathia-13,16-dioxacyclooctadecane, 1,4,7,10-Tetrathia-18-crown-6;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	ix	none	25°C	0.0	U			K1=32.3	1991BTa (83119)	568

\*\*\*\*

C12H2404S2 L CAS 296-39-9 (4938)  
 1,4,10,13-Tetraoxa-7,16-dithiacyclooctadecane;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	cal	oth/un	25°C	0.50M	M	H		K1=21.1	1990IWa (83141)	569

Medium: 0.5M HNO3. DH(K1)=-82.4 kJ mol-1, DS(K1)= 127.6 J K-1 mol-1.  
 \*\*\*\*

C12H2404S2 L (6528)  
 7,10,13,16-Tetraoxa-1,4-dithiacyclooctadecane;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	cal	oth/un	25°C	0.50M	M	H		K1=25.1	1990IWa (83151)	570

Medium: 0.5M HNO3. DH(K1)=-184.1 kJ mol-1, DS(K1)= -137 J K-1 mol-1.  
 \*\*\*\*

C12H29N3 L CAS 123-12-6 (4904)  
 (N,N,N",N"-Tetraethyl-diethylenetriamine; (C2H5)2N.CH2.CH2.NH.CH2.CH2.N(C2H5)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO4	25°C	0.50M	C	I			1981GMF (84249)	571

$K(PdL=PdLOH+H)=-7.688$   
 $K(PdL+PdLOH)=0.90$   
 In 0.5 NaNO3,  $K(PdL=PdLOH+H)=-7.677$ ,  $K(PdL+PdLOH)=0.48$   
 \*\*\*\*

C12H30N4 L (7251)  
 2,5,8,11-Tetramethyl-2,5,8,11-tetraazadodecane;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	R4N.X	25°C	0.10M	C	M		K1=23.38	1998BBa (84292)	572

$K(PdL+H+Cl)=6.85$   
 $B(PdH-1L)=13.9$   
 $K(PdL+OH)=4.3$   
 Medium: 0.1 M NMe4Cl  
 \*\*\*\*

C12H30N4 L (6740)  
 Tris(2-(dimethylamino)ethyl)amine; N(CH2CH2.N(CH3)2)3  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaCl	25°C	1.00M	U	I		K1=30.5	1993AMa (84303)	573
Pd++	gl	oth/un	25°C	1.00M	U	M			1993AMa (84304)	574

K(Pd(H<sub>2</sub>O)L+Cl=PdClL)=2.6  
K(Pd(H<sub>2</sub>O)L+Br=PdBrL)=2.8  
K(Pd(H<sub>2</sub>O)L+SCN=Pd(SCN)L)=5.57

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C12H30N6 L CAS 296-35-5 (143)  
1,4,7,10,13,16-Hexaaazacyclooctadecane; cyclo(-(NH.CH<sub>2</sub>.CH<sub>2</sub>)<sub>6</sub>-)

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	cal	NaCl	25°C	0.50M	U	HM			1993BBa (84349)	575
DH(2PdCl <sub>4</sub> +L=Pd <sub>2</sub> LCl <sub>2</sub> +6Cl)=-110.8 kJ mol <sup>-1</sup>										

Pd++ gl NaCl 25°C 0.50M C H K1=29.2 1992BBf (84350) 576  
B(PdHL)=37.47  
B(PdH<sub>2</sub>L)=42.40  
B(Pd<sub>2</sub>LCl<sub>2</sub>)=51.8

By calorimetry: DH(PdCl<sub>4</sub>+H<sub>6</sub>L)=-6.3 kJ mol<sup>-1</sup>.

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C13H8N2O6Cl2S H3L CAS 60743-06-8 (8478)  
2-[(3,5-Dichloro-2-hydroxyphenyl)azo]-5-sulfobenzoic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	NaClO <sub>4</sub>	RT	0.10M	C			K1=15.51	1978GSc (84477)	577

\*\*\*\*\*

C13H9N02BrCl HL CAS 104614-71-3 (9109)  
4-Bromo-N-(3-chlorophenyl)-N-hydroxybenzamide;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	diox/w	25°C	50%	C	M		K1=11.13	2001AMc (84578)	578

B(Pd(gly)L)=20.61

Medium: 50% v/v dioxane/H<sub>2</sub>O

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C13H9N02C1F HL CAS 104614-72-4 (9107)  
N-(3-Chlorophenyl)-4-fluoro-N-hydroxybenzamide;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	diox/w	25°C	50%	C	M		K1=11.34	2001AMc (84586)	579

B(Pd(gly)L)=20.98

Medium: 50% v/v dioxane/H<sub>2</sub>O

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C13H9N02C12 HL CAS 67201-86-9 (9108)  
4-Chloro-N-(3-chlorophenyl)-N-hydroxybenzamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	diox/w	25°C	50%	C	M	K1=11.15 B(Pd(gly)L)=20.58		2001AMc (84594)	580
Medium: 50% v/v dioxane/H <sub>2</sub> O										
*****										
C13H9N3O4S2		H2L					CAS	2536-61-0 (4031)		
1-(1',3'-Thiazol-2'-ylazo)-2-hydroxynaphthalene-6-sulfonic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	alc/w	25°C	50%	U	I	K1=13 B2=19.4		1967NPb (84644)	581
Medium: 50% MeOH, 0.1 M NaClO <sub>4</sub> . In 0% MeOH: K1=13, K2=5.7										
*****										
C13H10N02Cl		HL					CAS	36016-24-7 (1818)		
N-(4-Chlorophenyl)benzohydroxamic acid; C <sub>6</sub> H <sub>5</sub> .CO.N(C <sub>6</sub> H <sub>4</sub> Cl)OH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	diox/w	25°C	70%	U		K1=9.80 B2=18.21		1967JSa (84719)	582
Medium: 70% dioxan, 0.1 M KCl										
*****										
C13H10N02Cl		HL					CAS	78154-49-1 (5649)		
N-3-Chlorophenylbenzohydroxamic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	diox/w	25°C	50%	C	M	K1=11.47 B(Pd(gly)L)=21.29		2001AMc (84742)	583
Medium: 50% v/v dioxane/H <sub>2</sub> O										
*****										
C13H10N2O2		HL					CAS	56288-80-1 (4980)		
2-Hydroxy-4-(phenylazo)benzaldehyde; C <sub>6</sub> H <sub>5</sub> .N:N.C <sub>6</sub> H <sub>3</sub> (OH).CHO										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	30°C	50%	U		B2=7.64		1972DTb (84840)	584
*****										
C13H10N2O5S		H2L					CAS	98789-35-6 (5012)		
4-Hydroxy-3-formylazobenzene-4'-sulfonic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	30°C	aq	U		B2=7.22		1972DTb (84923)	585
*****										
C13H10N4O4S		H2L					(6644)			
4-Hydroxy-3-(1H-imidazol-2-ylazo)-2-naphthalenesuphonic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

Pd++ sp NaCl04 25°C 0.50M U K1=15.53 1992VMa (84960) 586  
For -3-ylazo analogue: K1=10.22; for 3,3-bis(1H-pyrazol-3-ylazo) analogue:  
K1=10.99

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C13H10N4S HL CAS 3788-81-6 (4014)

2-Picolinylaldehyde 2-benzothiazolylhydrazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ gl diox/w 25°C 50% U K1=10.33 1965HRa (84967) 587

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C13H10O2S H2L CAS 88220-26-2 (6572)

3-(1-Naphthyl)-2-mercaptopropenoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ sp NaCl04 25°C 0.10M C K1=15.56 B2=26.40 1989IBb (84976) 588

Medium: Aqueous 0.1 M NaCl04 containing 1-2% EtOH.

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C13H11N02 HL CAS 304-88-1 (181)

N-Phenylbenzohydroxamic acid; C6H5.CO.N(C6H5).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ EMF diox/w 25°C 70% U K1=10.11 B2=18.85 1967JSb (85171) 589

Medium: 70% dioxan, 0.1 M KCl

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C13H11N3O6S H2L (2811)

1-(2-Carboxy-5-sulfonatophenyl)-3-hydroxy-phenyltriazene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ sp none 25°C 0.0 U K1=10.398 1974CHa (85304) 590

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C13H12N2S HL CAS 156873-11-9 (8362)

2-[[1-(2-Pyridinyl)ethylidene]amino]benzene thiol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ dis NaCl 25°C 2.0M C 1998BMd (85391) 591

K(Pd+2HL(org)=PdL2(org)+2H)=2.9. Method: extraction into CHCl3.

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C13H12N4S L Dithizone CAS 60-10-6 (1801)

Diphenylthiocarbazone; C6H5.NH.NH.CS.N:N.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pd++ sp NaCl04 25°C 0.10M U K1=11.39 B2=21.78 1973BSe (85471) 592

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C13H13N30		HL	(4018)
3-Hydroxy-1-(2'-methylphenyl)-3-phenyltriazene;			
<hr/>			
Metal	Mtd	Medium	Temp Conc Cal Flags Lg K values
Pd++	gl	KCl	25°C 0.10M U K1=11.70 B2=22.97 1964PSa (85508) 593
<hr/>			
C13H13N30		HL	CAS 5756-83-2 (4019)
3-Hydroxy-1-(4'-methylphenyl)-3-phenyltriazene;			
<hr/>			
Metal	Mtd	Medium	Temp Conc Cal Flags Lg K values
Pd++	gl	KCl	25°C 0.10M U K1=11.89 B2=23.35 1964PSa (85514) 594
<hr/>			
C13H13N302		HL	CAS 5756-89-8 (4021)
3-Hydroxy-1-(4'-methoxyphenyl)-3-phenyltriazene;			
<hr/>			
Metal	Mtd	Medium	Temp Conc Cal Flags Lg K values
Pd++	gl	diox/w	25°C 70% U K1=12.06 B2=23.74 1965PSb (85522) 595
Medium: 70% dioxan, 0.1 M KCl			
<hr/>			
C13H20N202		L	Procaine CAS 59-46-1 (4029)
2-(Diethylamino)ethyl 4-aminobenzoate; H2N.C6H4.CO2.CH2.CH2.N(C2H5)2			
<hr/>			
Metal	Mtd	Medium	Temp Conc Cal Flags Lg K values
Pd++	sp	oth/un	25°C ? U B2=7.88 1968SPd (86097) 596
<hr/>			
C13H22N208		H4L	CAS 1798-14-7 (921)
(Pentamethylenedinitrilo)tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2CH2			
<hr/>			
Metal	Mtd	Medium	Temp Conc Cal Flags Lg K values
Pd++	gl	oth/un	20°C 1.00M C K1=26.4 1976AMa (86203) 597
Medium: NaBr/NaClO4. Corrected for PdBrx complexes			
<hr/>			
C13H22N403S		L	Ranitidine CAS 66357-35-5 (7144)
N(2-(5-Dimethylaminomethyl)-2-furanyl methyl)thioethyl-N-methyl-2-nitro-1-ethenediamine;			
<hr/>			
Metal	Mtd	Medium	Temp Conc Cal Flags Lg K values
Pd++	gl	NaCl	25°C 0.10M U K1=9.97 1995CCa (86332) 598
B(PdH-1L)=2.41			
B(PdH-2L)=-6.88			
<hr/>			
C13H26O4S2		L	(6656)
1,5-Dithia-8,11,14,17-tetraoxacyclononadecane, 1,5-Dithia-19-crown-6;			



Pd++ gl diox/w 25°C 50% U K1=9.94 B2=18.79 1989PMb (87067) 605

Pd++ gl diox/w 25°C 50% U K1=10.05 B2=19.15 1989PMb (87068) 606

Data also for 4-fluoro, 4-chloro, 4-bromo, 4-nitro and 4-methoxy analogues

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C14H12N03Cl1 HL CAS 67135-47-1 (9106)

N-(3-Chlorophenyl)-N-hydroxy-4-methoxybenzamide;

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

Pd++ gl diox/w 25°C 50% C M K1=11.82 2001AMc (87097) 607

B(Pd(gly)L)=22.06

Medium: 50% v/v dioxane/H<sub>2</sub>O

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C14H12N4O2Br2 HL CAS 72833-87-5 (2533)

2-(2-(3,5-Dibromopyridyl)azo)-5-dimethylaminobenzoic acid;

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

Pd++ sp diox/w 25°C 40% C K1=10.36 1986KHa (87319) 608

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C14H13N02 HL CAS 1503-92-0 (1817)

N-(4-Tolyl)benzohydroxamic acid; C<sub>6</sub>H<sub>5</sub>.CO.N(C<sub>6</sub>H<sub>4</sub>.CH<sub>3</sub>).OH

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

Pd++ gl diox/w 25°C 70% U K1=10.34 B2=19.19 1969JSa (87450) 609

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C14H13N02 HL CAS 1143-74-2 (4044)

N-2-Tolylbenzohydroxamic acid; C<sub>6</sub>H<sub>5</sub>.CO.N(C<sub>6</sub>H<sub>4</sub>.CH<sub>3</sub>).OH

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

Pd++ oth diox/w 25°C 70% U K1=19.02 1968JSc (87482) 610

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C14H13N3O2 HL (4045)

1-(4'-Acetylphenyl)-3-hydroxy-3-phenyltriazene;

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

Pd++ gl diox/w 25°C 70% U K1=10.97 B2=21.51 1964PSe (87594) 611

Medium: 70% dioxan, 0.1 M KCl

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C14H13N5O5 HL (5394)

1-(2-Pyridylmethylideneamino)-3-(salicylideneamino)thiourea;

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

Pd++ sp mixed 25°C 40% U 1985RGa (87617) 612

K1eff=5.57

Medium: 40% DMF, pH 4.5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	mixed	25°C	32%	U				1985RGa (87624)	613
								K1eff=5.38		

Medium: 32% DMF, pH 4.5

C14H14N4OBr2 HL CAS 35601-32-2 (5092)  
5-(3,5-Dibromo-2-pyridylazo)-2-ethylamino-4-hydroxy-1-methylbenzene:

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
Pd++	sp	oth/un	?	?	U		K1=6.94			1967GUa (87688)	614
*****											

C14H14S2 L CAS 42311-15-9 (5031)  
1,2-Bis(phenylthio)ethane; C6H5.S.CH2.CH2.S.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	M			1969CCb (87708)	615
								$K(PdI4+L=PdLI2+2I)=0.72$		

C14H15N4OBr HL CAS 14337-50-9 (5095)  
5-(5-Bromo-2-pyridylazo)-2-ethylamino-4-hydroxy-1-methylbenzene:

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
Pd++	sp	oth/un	?	?	U					1967GUa (87768)	616
							$k(?)$	-7	35		

C14H16N2O2S2 L CAS 72960-10-6 (9255)  
2,3,5,6,8,9-Hexahydro[1,4,7,10]dioxadithiacyclododecino[2,3-b]quinoxaline;

Pd++ nmr mixed 25°C 60% C K1=4.20 2004HHA (87879) 617  
Method: 1H nmr. Medium: 60% CD2Cl2/CD3CN.

C14H16N2O2S2 L CAS 729600-11-7 (9256)  
2,3,5,6,8,9-Hexahydro[1,4,7,10]dioxadithiacyclododecino[8,9-b]quinoxaline;

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Pd++ nmr mixed 25°C 60% C K1=3.61 2004HHA (87880) 618  
 Method: <sup>1</sup>H nmr. Medium: 60% CD<sub>2</sub>C<sub>12</sub>/CD<sub>3</sub>CN.

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C14H16N204S H2L Dansyl-Gly CAS 1091-85-6 (5845)  
N-Dansylglycine, (5-Dimethylamino)naphthalene-1-sulfonoglycine;  
(CH<sub>3</sub>)<sub>2</sub>N.C<sub>10</sub>H<sub>6</sub>.SO<sub>2</sub>.NH.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	vlt	NaClO <sub>4</sub>	25°C	0.10M	U			K1=17.8 B(PdL(OH))=21.6 Beff(PdH-2L2)=21.8 Beff(PdH-2L2(OH))=21.6	1990GBb (87901)	619

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C14H18N4 L DPEN CAS 4608-34-3 (1850)  
N,N'-Bis-(2-pyridylmethyl)-1,2-diaminoethane; (C<sub>5</sub>H<sub>4</sub>N.CH<sub>2</sub>.NH.CH<sub>2</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	25°C	1.00M	C			K1=35.6	1985YAa (88117)	620

Medium: NaBr

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C14H23N3010 H5L DTPA CAS 67-43-6 (238)  
Diethylenetriamine-pentaethanoic acid; HOOC.CH<sub>2</sub>.N(CH<sub>2</sub>.CH<sub>2</sub>.N(CH<sub>2</sub>.COOH)<sub>2</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO <sub>4</sub>	20°C	1.00M	U	M		K1=29.7 K(PdL+H)=3.49 K(PdHL+H)=2.93 K(PdH2L+H)=2.56 K(PdH3L+H)=1.93	1976AMa (89356)	621

K(PdL+SCN=PdL(SCN))=1.45; K(PdL+Br=PdBr)=-1.K1 in NaBr by exchange with PdBr<sub>4</sub>

Pd++ EMF oth/un 25°C 0.20M U K1=24.60 1972KIa (89357) 622

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C14H24N208 H4L HMDTA CAS 1633-00-7 (920)  
1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH<sub>2</sub>)<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.CH<sub>2</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	NaClO <sub>4</sub>	20°C	0.10M	U	I			1983KVa (89596)	623

K(PdCl<sub>1</sub>+HL)=17.3  
B(PdCl<sub>1</sub>L(OH))=39.72  
K(PdCl<sub>1</sub>L+OH)=15.60  
K(PdCl<sub>1</sub>L+2OH)=28.35

B(Pd(OH)Cl<sub>1</sub>L)=43.72; B(Pd<sub>2</sub>Cl<sub>2</sub>(OH)<sub>2</sub>L)=57.43. Data also at 1.0 M

Pd++ gl oth/un 20°C 1.00M C K1=26.3 1976AMa (89597) 624

Medium: NaBr/NaClO<sub>4</sub>. By exchange with PdBr<sub>4</sub>

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C14H26N208 H2L (6658)

1,4,10,13-Tetraoxa-7,16-diaza-2,3-dicarboxycyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	gl	R4N.X	25°C	0.10M	U		K1=8.5 B(PdHL)=15.6	1990AFa (90224)	625

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C14H28N6O4 H2L (832)

N,N,N',N'-Tetrakis(2-carbamoylethyl)diaminoethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	gl	NaClO4	25°C	0.10M	C			1986HPa (90505)	626

K(Pd+H2L)=11.24

K(Pd+H2L=PdHL+H)=8.35

K(Pd+H2L=PdL+2H)=4.37

K(PdH2L=PdHL+H)=-2.89

K(PdHL=PdL+H)=-3.98

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C14H34N4 L (7402)

2,6,9,13-Tetramethyl-2,6,9,13-tetraazatetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	gl	R4N.X	25°C	0.10M	C		K1=22.95 K(PdL+H+Cl)=9.30 B(PdH-1L)=13.96 K(PdL+OH)=4.82 K(PdClHL+H+Cl=PdCl2H2L)=4.52	1998BBa (90834)	627

Medium: 0.1 M Me4NCl

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C14H35N7 L CAS 296-85-5 (9052)

1,4,7,10,13,16,19-Heptaazacycloheicosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	gl	NaCl	25°C	0.50M	C	H	K1=24.55 B(PdHL)=34.92 B(PdH2L)=42.63 B(PdH3L)=47.13 B(Pd2LC1)=>52	1992BBf (90857)	628

By calorimetry: DH(PdCl4+H7L)=-6.3 kJ mol-1.

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C14H37N7 L CAS 298-85-5 (5606)

1,4,7,10,13,16,19-Heptaazacycloheicosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pd++	cal	NaCl	25°C	0.50M	U	HM		1993BBa (90917)	629

DH(2PdCl4+L=Pd2LC12+6Cl)=-119.2 kJ mol-1

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C15H10N3OBr HL (5128)  
4-(5-Bromo-2-pyridylazo)-1-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	dis	NaCl	?	?	U			1967GVc (90944)	630	
								$K(Pd+H\text{L} \rightleftharpoons Pd\text{L} + H) = 7.05$		

C15H12N4 L (4056)  
2-Picolinealdehyde 2'-quinolylhydrazone; C5H4N.CH:N.NH.C9H6N

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

Pd++ gl diox/w 25°C 50% U K1=10.57 1965HRa (91454) 631

C15H14N03Cl                  HL                  CAS 113581-14-9 (9105)  
N-(3-Chlorophenyl)-4-ethoxy-N-hydroxybenzamide;

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

Pd++ gl diox/w 25°C 50% C M K1=11.91 2001AMc (91706) 632  
B(Pd(gly)L)=22.34

**Medium:** 50% v/v dioxane/H<sub>2</sub>O

C15H16N2O2 HL CAS 7397-15-1 (6853)  
Peonolphenylhydrazone;

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

Pd++ gl dioxygen 20°C 75% U T K1=13.27 B2=26.05 1991NNa (91927) 633  
 30 C: K1=13.08, K2=12.42; 40 C: K1=12.92, K2=12.38

C15H16N4OBr2                  HL                  CAS 14337-54-3 (993)  
2-(3,5-Dibromo-2-pyridylazo)-5-diethylaminophenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Pd++ sp oth/un ? ? U 1967GVb (91942) 634  
 $K(Pd+HL=PdL+H)=6.3$

C15H16S2 L CAS 42837-97-3 (5105)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	alc/w	25°C	100%	U	M			1969CCa (91967)	635
								$K(PdI4+L=PdLI2+2I) = -1.18$		

Medium: CH<sub>3</sub>OH.

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C15H17N4OBr	HL	CAS 14357-53-2 (712)												
2-(5-Bromo-2-pyridylazo)-5-diethylaminophenol; BrC5H3N.N:N.C6H3(OH)N(CH3)2														
<hr/>														
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo				
<hr/>			Pd++	sp	oth/un	?	?	U	1967GVb (91982)	636				
			K(Pd+HL=PdL+H)=7.0						<hr/>					
<hr/>			<hr/>											
C15H18N2O2S2	L	CAS 729600-13-9 (9258)												
2,3,6,7,9,10-Hexahydro-5H-[1,4,7,11]dioxadithiocyclotridecino[2,3-b]quinoxalene;			<hr/>											
<hr/>			Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo	
<hr/>			Pd++	nmr	mixed	25°C	60%	C		K1=3.53		2004HHA (92008)	637	
Method: 1H nmr. Medium: 60% CD2Cl2/CD3CN.			<hr/>									<hr/>		
<hr/>			C15H18N4O	HL	CAS 14337-52-1 (5124)									
5-Diethylamino-2-(2-pyridylazo)phenol;			<hr/>									<hr/>		
<hr/>			Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo	
<hr/>			Pd++	sp	oth/un	?	?	U		1967GVA (92098)	638			
			K(?)=6.0						<hr/>				<hr/>	
<hr/>			C15H20N4	L	DPTN	CAS 63671-70-5 (1851)								
N,N'-Bis-(2-pyridylmethyl)-1,3-diaminopropane; (C5H4N.CH2.NH.CH2)2CH2			<hr/>									<hr/>		
<hr/>			Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo	
<hr/>			Pd++	sp	oth/un	25°C	1.00M	C		K1=39.1		1985YAA (92185)	639	
Medium: NaBr			<hr/>									<hr/>		
<hr/>			C15H25N3O10	H5L	(5127)									
Diethylenetriamine-N,N,N",N"-tetraethanoic acid-N'-propanoic acid;			<hr/>									<hr/>		
<hr/>			Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo	
<hr/>			Pd++	dis	NaCl	?	?	U		1967GVC (92380)	640			
			K(Pd+HL=PdL+H)=6.57						<hr/>				<hr/>	
<hr/>			C15H37N5	L	CAS 3803-11-2 (1798)									
2,5,8,11,14-Pentamethyl-2,5,8,11,14-pentaazapentadecane;			<hr/>									<hr/>		
<hr/>			Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo	
<hr/>			Pd++	gl	R4N.X	25°C	0.10M	C	M	K1=21.41		1998BBa (92627)	641	
			K(PdL+H)=8.68						<hr/>				<hr/>	
<hr/>			K(PdHL+H+C1)=5.76						<hr/>				<hr/>	
<hr/>			B(PdH-1L)=10.95						<hr/>				<hr/>	
<hr/>			K(PdL+OH)=3.4						<hr/>				<hr/>	

Medium: 0.1 M NMe4Cl

\*\*\*\*\*  
C16H11N207ClS2 H3L CAS 4768-88-1 (7743)  
4-Chloro-phenylazo-R-acid, 1-(4-Chlorophenylazo)-2-naphthol-3,6-disulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sp oth/un 25°C C 1999HAa (92772) 642  
K1eff=3.75  
B2eff=8.55

Medium: Universal Buffer, pH 6.0

\*\*\*\*\*  
C16H12N204S H2L CAS 13964-82-4 (3475)  
1-(4-Sulfophenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sp oth/un 25°C ? U 1968SDa (93003) 643  
B2eff=9.8 (pH 4)

\*\*\*\*\*  
C16H12N2011S3 H5L CAS 548-81-2 (5180)  
2-(4'-Sulfophenylazo)chromotropic acid,  
2-(4-sulfophenylazo)-1,8-dihydroxyaphthalene-3,6-diHSO3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sp oth/un 25°C dil C 1985SSg (93099) 644  
B2eff=10.0 (pH 3.5)  
B3eff=15.0 (pH 10.5)

Medium: dilute buffer solution (not stated).

\*\*\*\*\*  
C16H13N04S HL (5182)  
N-4-Toluenesulfonyl-benzofur-2-yl-carboxamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ EMF alc/w ? 70% U B2=6.10 1971MSc (93160) 645

Medium: 70% MeOH

\*\*\*\*\*  
C16H13N2010AsS2 H5L Thorin I CAS 3688-92-4 (2609)  
1-((2-Arsonophenyl)azo)-2-hydroxy-3,6-naphthalyldisulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Pd++ sp oth/un 25°C ? U 1964SDd (93205) 646  
K1eff=4.4 (pH 3)

\*\*\*\*\*  
C16H14N402S HL CAS 83688-78-2 (2534)  
2-(2-Benzothiazolylazo)-5-dimethylaminobenzoic acid;





C17H24N4 L CAS 49764-71-3 (5757)  
N,N'-Bis((2-pyridyl)methyl)-1,5-pentanediamine; C5H4N.CH2.NH.(CH2)5.NH.CH2.C5H4N

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

Pd++ sp oth/un 25°C 1.00M C I M K1=34.7 1985YAa (96436) 659

Medium: NaBr. Ternary complex with Br-

\*\*\*\*\*  
C18H15O3PS HL CAS 16704-71-5 (3365)

3-Diphenylphosphino-benzene sulfonic acid;

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

Pd++ ISE NaClO4 25°C 1.0M U K1=10.2 B2=20.00 1972CBa (97110) 660  
K3=6.3  
K4=4.9

\*\*\*\*\*  
C18H15P L CAS 603-35-0 (621)

Triphenylphosphine; (C6H5)3P

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

Pd++ vlt non-aq 20°C 100% C 1998ACd (97144) 661  
K(Pd(Ph)L2+Cl)=4.28  
K(Pd(Ph)L2+Br)=3.56  
K(Pd(Ph)L2+I)=3.23  
K(Pd(Ph)L2+acetate)=2.88

Medium: DMF. Method: chronoamperometry.

Pd++ kin non-aq 25°C 100% U T HM 1988JHc (97145) 662  
K(PdABL+L=PdAL2+B)=2.39

Medium: acetonitrile. A=2,5-dioxo-3,6-dichloro-1,4-benzoquinone, B=CH3CN

Data also at 30, 35, 40, 45 C

\*\*\*\*\*  
C18H18N202S2 L CAS 729600-12-8 (9257)  
2,3,5,6,8,9-Hexahydrobenzo[g][1,4,7,10]dioxadithiacyclododecino[2,3-b]quinoxaline;

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

Pd++ nmr mixed 25°C 60% C K1=3.82 2004HHa (97229) 663

Method: 1H nmr. Medium: 60% CD2Cl2/CD3CN.

\*\*\*\*\*  
C18H26N4 L CAS 80284-81-7 (5758)  
N,N'-Bis((2-pyridyl)methyl)-1,6-hexanediamine; C5H4N.CH2.NH.(CH2)6.NH.CH2.C5H4N

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

Pd++ sp oth/un 25°C 1.00M C K1=34.7 1985YAa (97679) 664

Medium: KBr. K is only a limiting value

\*\*\*\*\*

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)  
 Triethylenetetraaminehexaethanoic acid;((HOOC.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	NaClO4	25°C	0.5M	C			K1=18.73 K(PdL+H)=6.92 K(PdH2L+H)=2.50 K(PdHL+H)=2.90 K(PdH3L+H)=2.45	1984NAb (98082)	665

K(2Pd+L)=27.50; K(Pd2L+H)=3.20

K(Pd2HL+H)=2.0

---

C18H40N4O4 L CAS 89066-60-2 (867)  
 N,N',N'',N'''-Tetrakis(2-hydroxyethyl)-1,4,8,11-tetraazacyclotetradecane;

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

Pd++	gl	NaClO4	25°C	0.10M	C			K1=18.32	1987HPa (98924)	666
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C18H44N6 L (7252)

2,5,8,11,14,17-Hexamethyl-2,5,8,11,14,17-hexaazaoctadecane;

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

Pd++	gl	R4N.X	25°C	0.10M	C	M			1998BBa (98955)	667
------	----	-------	------	-------	---	---	--	--	-----------------	-----

B(PdHL)=30.83

K(PdHL+H)=7.16

B(PdH-1L)=10.75

B(Pd2LC12)=44.0

Medium: 0.1 M NMe4Cl. B(Pd2H-1LC1)=33.9, K(Pd2LC12+H+Cl)=5.8

---

C19H14O7S H4L Pyrocatechol Vi CAS 369596-29-2 (709)

Pyrocatechol Violet,

3-[3,4-Dihydroxyphenyl-3-hydroxy-4-oxo-2,5-cyclohexadien-1-ylidenemethyl-b.;

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

Pd++	gl	KNO3	25°C	0.10M	U				1997USa (99112)	668
------	----	------	------	-------	---	--	--	--	-----------------	-----

K(Pd+H2L)=8.29

K(Pd+HL)=13.67

K(PdL+OH)=3.60

K(2Pd+HL=Pd2L+H)=15.91

K(Pd2L+OH)=8.25.

---

C19H24N2O5 L (2547)

10-(3-Dimethylamine-2-methyl-propyl)-2-methoxyphenothiazine;

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

Pd++ sp KCl 25°C 1.00M U K1=4.32 1978J0a (99349) 669  
\*\*\*\*\*

C21H17N203P L CAS 215457-01-5 (8001)

Diphenyl-3-(4-methoxyphenylsydnonyl)phosphine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	non-aq	25°C	100%	C				2001LPb (101075)	670
								K(PdLC12+benzylamine)=-0.49		
								K(PdLC12+dibenzylamine)=-0.38		
								K(PdLC12+diethylamine)=-0.44		
								K(PdLC12+triethylamine)=-0.69		

Medium: CH<sub>2</sub>Cl<sub>2</sub>. Also data for dimethylamine, 2-aminopyridine, 4-anisidine, pyridine, 4-toluidine and aniline.

C21H18N406S H2L CAS 86170-15-2 (8412)

2-[5-(2-Methoxy-5-sulfophenyl)-3-phenyl-1-formazano]-benzoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	NaClO <sub>4</sub>	26°C	0.10M	C			K1=14.90	1983UCa (101119)	671

For the ligand, K1=14.4, K2=3.6.

C21H21P L CAS 6163-58-2 (600)  
Tri(2-methylphenyl)phosphine (or 4-methyl where indicated); (CH<sub>3</sub>.C<sub>6</sub>H<sub>4</sub>)<sub>3</sub>P

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	non-aq	25°C	100%	U	TIHM			1981MKa (101193)	672

K(PdA2+L)=3.14

Medium: benzene. HA = trifluoroacetylacetone

C21H22N40 HL CAS 56932-30-0 (5308)

1-Hydroxy-2-(2-N-methylanabasinyl-alpha-azo)naphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	?	?	U			B2=10.53	1966APa (101203)	673

C22H26N30F3S L Fluphenazine CAS 146-56-5 (2548)  
10-[3]-4-(2-Hydroxyethyl)piperazine-1-yl-propyl-2-trifluoromethylphenothiazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	KCl	25°C	1.00M	U			K1=5.13	1978J0a (101926)	674

C23H16O9Cl2S H4L Chrome azurol S CAS 1667-99-8 (711)  
Chromazurol S;

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

Pd++	sp	KCl	25°C	0.10M	C	K1=6.36	1975ISa (102565)	675
Pd++	sp	NaNO <sub>3</sub>	25°C	0.10M	U	B(Pd2L)=9.80 B(Pd2L2)=15.27 K(Pd+HL)=4.90	1972MSd (102566)	676
Pd++	sp	oth/un	25°C	?	U	K(?)=4.8	1963SDc (102567)	677
*****								
C23H18O9S		H4L	Eriochrome cyan	CAS 3564-18-9	(433)			
4'-Hydroxy-3,3'-dimethyl-2''-sulfofuchsone-5,5'-dicarboxylic acid;								
Metal	Mtd	Medium	Temp	Conc	Cal Flags	Lg K values	Reference	ExptNo
Pd++	sp	oth/un	25°C	?	U	K <sub>2eff</sub> =5.0 (pH=4.5)	1970SMd (102634)	678
*****								
C23H31N3O4		H2L				(7088)		
1,4,7-Trimethyl-1,7-bis(4-carboxybenzyl)-1,4,7-triazaheptane;								
CH <sub>3</sub> N(CH <sub>2</sub> CH <sub>2</sub> N(CH <sub>3</sub> )CH <sub>2</sub> C <sub>6</sub> H <sub>4</sub> COOH) <sub>2</sub>								
Metal	Mtd	Medium	Temp	Conc	Cal Flags	Lg K values	Reference	ExptNo
Pd++	gl	NaCl	25°C	0.15M	C M		1995BBc (102773)	679
*****								
B(PdLC1)=19.10								
B(PdHLC1)=23.15								
K(PdLC1+H)=4.05								
*****								
C24H23N9O2		HL				(5330)		
1,5-Bis(4-antipyrinyl)-3-cyanoformazan;								
Metal	Mtd	Medium	Temp	Conc	Cal Flags	Lg K values	Reference	ExptNo
Pd++	sp	NaClO <sub>4</sub>	25°C	0.10M	U	K1=28.1	1971BSf (102934)	680
*****								
C26H25N09S		H4L	Semi-Xylenol O			(426)		
3-(N,N-Di(carboxymethyl)aminomethyl)-2-cresolsulfonephthalein;								
Metal	Mtd	Medium	Temp	Conc	Cal Flags	Lg K values	Reference	ExptNo
Pd++	sp	KNO <sub>3</sub>	25°C	0.10M	C I	B(Pd2L)=26.62	1991HKg (103948)	681
*****								
C27H29N011		L	Adriamycin			CAS 25316-40-9	(2407)	
Doxorubicin;								
Metal	Mtd	Medium	Temp	Conc	Cal Flags	Lg K values	Reference	ExptNo

Pd++ gl oth/un 25°C 0.10M U 1986FGa (104461) 682  
 $K(Pd+HL=0.5(PdL)2)=22.1$

Medium not stated.

C30H50N6

L

(7089)

1,4,7,16,19,22-Hexamethyl-1,4,7,16,19,22-hexaaza[9.9]paracyclophane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	R4N.X	25°C	0.10M	C				1999BBd (105354) 683	
								B(PdH2LC1)=37.44		
								B(Pd2LC12)=42.9		
								B(Pd2HLC13)=47.3		

Medium: NMe4Cl. Additional method: 1H and 13C nmr.

C31H32N2013S H6L Xylenol orange CAS 63721-85-5 (432)  
5,5'-Bis-N,N-bis(carboxymethyl)aminomethyl-4'-hydroxy-3,3'-dimethylfuchsone-2"-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	sp	oth/un	25°C	?	U				19630Ta (105488) 684	
								K(?)=10.3		

C32H44N1004 L CAS 702699-42-1 (9126)  
2,9-Di[4-(1,4,7,10-tetraazacyclotridecane-11,13,-dione)methyl]-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	KNO3	25°C	0.10M	U				2004GLa (105774) 685	
								B(PdH2L)=19.82		
								B(Pd2L)=15.83		
								B(Pd3H-2L)=9.93		
								B(Pd3H-3L)=-3.52		

B(Pd3H-4L)=-13.72.

C35H57N504 L CAS 160320-59-2 (7393)  
1,4,7-Trimethyl-19,22,28,31-tetraoxa-1,4,7,124,23-pentaaza[9.25]-4-cyclophane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pd++	gl	R4N.X	25°C	0.10M	C				1999BBd (106212) 686	
								B(PdLC1)=23.7		
								B(PdHLC1)=31.1		
								B(PdH2LC1)=36.7		
								K(PdLC1+H)=7.4		

Medium: NMe4Cl. Additional method: 1H and 13C nmr. K(PdHLC1+H)=5.6.

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#### EXPLANATORY NOTES

DATA Flags are :-

- T Data at other TEMPERATURES  
I Data with various BACKGROUNDS  
H Data for THERMOCHEMICAL quantities  
M Data for TERNARY Complexes

EVALUATION Flags are :-

T or IUP=T signifies EVALUATION RATING = Tentative by IUPAC

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