START Experiments recorded for
    from SC-Database on Saturday, 01 January, 2000 at 00:45:09
Software version = 5.81 Data version = 4.62
Experiment list contains 153 experiments for
 (no ligands specified)
 Metal : Ge(IV)
 (no references specified)
 (no experimental details specified)

****
e- HL Electron (442)
Electron;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) kin oth/un 25?°C 1.00M U 1965REa (513) 1
K(Ge(IV) + 2e = Ge++)=0
K(Ge(IV)+4e=Ge(s))=8.38, 124mV
Medium: H2SO4

Ge(IV) EMF none 25°C 0.0 U 1959LBa (514) 2
K=-4.0(brown GeO,-118 mV)
K=-9.2(yellow GeO,-273 mV)
K(Ge(II)+2e=Ge(s))=7.81(231mV)
K: GeO2(s,hex)+2H+2e=GeO(s)+H2O. K(H2GeO3+4H+4e=Ge(s)+3H2O)=0.7(11 mV)
****
Br- HL Bromide CAS 10035-10-6 (19)
Bromide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) dis oth/un 25°C ? C 1991SOa (1943) 3
K(GeMe(OH)+H+L=GeMeL)=-2.57
K(GeMe(OH)2+2H+2L=GeMeL2)=-4.3
K(GeMe(OH)3+3H+3L=GeMeL3)=-4.7
K(GeMe2(OH)+H+L=GeMe2L)=-1.59
K(GeMe2(OH)2+2H+2L=GeMe2L2)=-3.49
****
Cl- HL Chloride CAS 7647-01-0 (50)
Chloride;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) dis oth/un 25°C ? C 1991SOa (4931) 4
K(Ge(OH)+H+L=GeL(H2O))=-3.02
K(Ge(OH)2+2H+2L=GeL2)=-3.84
K(Ge(OH)3+3H+3L=GeL3)=-4.82
K(Ge(OH)4+4H+4L=GeL4)=-5.09
K(MeGe(OH)+H+L=MeGeL)=-2.31; K(MeGe(OH)2+2H+2L=MeGe(OH)2)=-2.95; K(MeGe(OH)3
+3H+3L=MeGeL3)=-3.81; K(Me2Ge(OH)+H+L=Me2GeL)=-0.71;K(Me2Ge(OH)2+2H+2L)=-2.2

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--------------------------------------------------------------------------------
Ge(IV)     sp  oth/un   ?   var  U                      1961ADb  (4932)   5
                                        K5K6=-5.06
********************************************************************************
F-                     HL    Fluoride         CAS 7644-39-3  (201)
Fluoride;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ge(IV)     ISE NaClO4 25°C 3.00M U  I                     1990CIc  (6930)   6
                                        *B(2,-1)=2.9
                                        *B(4,0)=7.18
                                        *B(4,1)=6.65
                                        *B(6,1)=9.94
*B(6,2)=9.59. *B(p,q): Ge(OH)4 + pHF = Ge(OH)xFp + qH + 4-x H2O. Data also
in 3.0 M LiClO4
--------------------------------------------------------------------------------
Ge(IV)     dis oth/un 20°C    ?  U       K1=1.68   B2=3.03   1979NVa  (6931)   7
                                        B3=4.18
                                        B4=5.17
                                        B5=6.07
                                        B6=7.24
--------------------------------------------------------------------------------
Ge(IV)     ix  oth/un   ?     ?  U                      1972PAb  (6932)   8
                                        K6=3.21
--------------------------------------------------------------------------------
Ge(IV)     ix  KCl      ?  0.50M U                      1968PMf  (6933)   9
                                        K6=3.86
--------------------------------------------------------------------------------
Ge(IV)     ISE oth/un 25°C  var  U T                     1965RKa  (6934)  10
                                        K=-30.9
                                        K(GeF6+2H2O=4H+6F+GeO2)=-25.8
K: K2GeF6(s)+2H2O=2K+4H+6F+GeO2(s,hex)
--------------------------------------------------------------------------------
Ge(IV)     oth NaCl   50°C 0.40M U T H                  1964RKb  (6935)  11
                                        K(GeF5H2O+HF=GeF6+H3O)=0.34
Method:chemical analysis. K=0.66(0 C),0.62(10 C),0.58(20 C),0.50(30 C),
0.42(40 C). At 25 C: DH(K)=10.8 kJ mol-1, DS=-26.3 J K-1 mol-1
--------------------------------------------------------------------------------
Ge(IV)     oth oth/un 25°C  dil  U T                    1964RKc  (6936)  12
                                        K(GeF4H2OOH+HF+F=GeF6)=5.3
Method: chemical analysis, quinhydrone electrode. At 0 C:K=5.9
--------------------------------------------------------------------------------
Ge(IV)     EMF NaClO4 25°C 0.50M U                     1963BPb  (6937)  13
                                        K(Ge(OH)4+4HF)=7.30
                                        K(Ge(OH)4+5HF)=8.94
********************************************************************************
MoO4--                 H2L    Molybdate          (443)
Molybdate;
--------------------------------------------------------------------------------
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	oth/un	?	?	U		1960KRb (8735)		14

K(H4GeO4+4H2Mo3O10=H4GeMo12O40+4H2O)? =12.86 (pH 2.40)

****

OH- HL Hydroxide (57)

Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	NaClO4	25°C	0.10M	C		2000KAa (11543)		15
							K(Ge(OH)4=GeO(OH)3+H)=-9.16		
Ge(IV)	gl	oth/un	25°C	0.0	C	T	1998PSb (11544)		16
							K(GeO2(s)+2H2O=Ge(OH)4)=-5.02		
							K(GeO(OH)3+H=Ge(OH)4)=9.32		

Method: solubility of GeO2(tetr) in dil KOH, 21-90 C. Also solubility data for GeO2 at pH 1.5-10 at 25-350 C.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sol	NaCl	25°C	0.10M	C		1998PSc (11545)		17
							Ks(GeO2+2H2O=Ge(OH)4)=-1.38		

Method: solubility of GeO2(hex) in NaCl.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sol	none	RT	0.0	C		1990DEa (11546)		18
							Ks(Ge(OH)4+2H)=-19.26		
							K(4Ge(OH)4(s)+GeO2(OH)2)=13.15		

K: 4Ge(OH)4(s)+GeO2(OH)2=Ge5O11+9H2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	KNO3	25°C	0.10M	U	I	K1=14.18 B2=27.98	1968NFa (11547)	19
							B3=41.52		
							B4=54.81		

K1=13.73, B2=29.28, B3=43.47, B4=56.98(I=1). Also when I=0.3, 0.5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	dis	oth/un	25°C		U		K1=14.78 B2=29.18	1966ANa (11548)	20
							B3=43.32		
							B4=56.85		

Medium: LiCl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sol	oth/un	25°C	var	U		1964GZa (11549)		21
							*Ks(Ge(OH)2(s)+H=GeOH)=-1.26		
							K(GeOH+H=Ge(II))=-1.7 ?		

Ge as Ge++ ?

****

O2-- H2L Peroxide CAS 7772-84-1 (2813)

Peroxide; -O.O-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	U		1960ARb (12665)		22
							K(GeO(OH)3+2H2L)=1.68		

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp oth/un 70°C ? U 1974NOa (16226) 23
K(GeO2+HL)=-0.15
Medium: H2SO4
****
CH4O L Methyl alcohol CAS 67-56-1 (597)
Methanol; CH3.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) EMF alc/w 20°C 100% U 1964GUa (17882) 24
K(Ge(H-1L)3+H-1L)=13.65
K(Ge(H-1L)4+H=Ge(H-1L)3)=2.95
Method: H electrode. Medium: MeOH, 1.0 M Me4NCl
****
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
---
Ge(IV) ix oth/un 25°C ? U 1964KSd (18914) 25
K3=3.5
****
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
---
Ge(IV) gl KNO3 25°C 0.10M U 1975BPf (20552) 26
K(Ge(OH)2+2L)=0.25
****
C2H6OS HL CAS 60-24-2 (841)
2-Mercaptoethanol; HS.CH2.CH2.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1963ATa (22065) 27
K(H2GeO3+2HL=GeOH(H1L)2+H)=-4.22
****
C2H6O2 L Ethyleneglycol CAS 107-21-1 (924)
1,2-Dihydroxyethane (Ethane-1,2-diol); HO.CH2.CH2.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) EMF KCl 25°C 0.10M U 1959ANa (22147) 28

K(HGeO3+L)=0.17
K(HGeO3+2L)=-0.37
Method: quinhydrone electrode
****
C2H8O7P2 H4L HEDPA CAS 2809-21-4 (436)
1-Hydroxyethane-1,1-diphosphonic acid; CH3.C(OH)(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	NaNO3	20°C	0.10M	U			1983SBb (23376)	29
							K(Ge(OH)2+H3L)=2.52		

****
C3H6OS2 HL Xanthic acid CAS 151-01-9 (590)
(Ethoxy)dithiomethanoic acid; CH3.CH2O.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	KNO3	20°C	0.10M	U	I		1982SGc (24873)	30
							K(Ge(OH)2+2L)=8.81		

****
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
Ge(IV)	gl	KNO3	25°C	0.10M	U			1975BPf (25454)	31
							K(Ge(OH)2+2L)=0.46		
Ge(IV)	con	NaCl	18°C	1.0M	U			1957VAa (25455)	32
							K(H2GeO3+2HL)=0.6(?)		
Ge(IV)	gl	oth/un	18°C	0.0	U			1957VAa (25456)	33
							K(H2GeO3+2HL)=1.9(?)		

****
C3H8O2 L Propyleneglycol CAS 57-55-6 (2025)
Propan-1,2-diol; CH3.CH(OH).CH2(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	EMF	KCl	25°C	0.10M	U			1959ANa (27677)	34
							K(HGeO3+L)=0.28		
							K(HGeO3+2L)=0.06		

Method: quinhydrone electrode.
****
C3H8O3 L Glycerol CAS 56-81-5 (2707)
Propane-1,2,3-triol; HO.CH2.CH(OH).CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	U	I		1957ANa (27735)	35

K(HGeO3+L)=1.21
K(HGeO3+2L)=1.94
K(HGeO3+2L)=1.105-1.700sqrtI
****
C3H12NO9P3 H6L NTPA CAS 6419-19-8 (2920)
Nitrilotris(methylenephosphonic acid); N(CH2PO3H2)3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp KNO3 20°C 0.10M U 1984SBa (28570) 36
K(Ge+H2L)=13.64
****
C4H6O5 H2L Malic acid CAS 617-48-1 (393)
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOC.CH2.CH(OH).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) con NaCl 18°C 1.0M U 1957VAa (30639) 37
K(H2GeO3+2H2L)=0.68

Ge(IV) gl oth/un 18°C 0.0 U 1957VAa (30640) 38
K(H2GeO3+2H2L)=2.92
****
C4H6O6 H2L L-Tartaric acid CAS 87-69-4 (92)
L-Tartaric acid, L-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaNO3 25°C 0.10M U 1973BPa (31266) 39
K(Ge(OH)2+H2L)=4.13

Ge(IV) gl NaCl 18°C 1.0M U 1957VAa (31267) 40
K(H2GeO3+HL)=5.2
****
C4H10O2 L Butanediol CAS 26171-83-5 (3574)
Butanediol (1,2-/1,3-/1,4- etc not stated)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) EMF KCl 25°C 0.10M U 1959ANa (34667) 41
K(HGeO3+L)=0.64
K(HGeO3+2L)=0.04
Method: quinhydrone electrode.
****
C4H10O3 L CAS 623-39-2 (3577)
3-Methoxypropan-1,2-diol; CH2(OH).CH(OH).CH2.OCH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) oth KCl 25°C 0.10M U 1959ANa (34707) 42

K(HGeO3+L=GeO2H-2L)=0.84
K(HGeO3+2L=HGeO(H-2L)2)=0.58
Method: quinhydrone electrode
****
C4H11NO8P2 H5L CAS 2439-99-8 (2129)
N-Carboxymethyl-N,N-bis(methylenephosphonic acid); HOOC.CH2.N(CH2.PO3H2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp KNO3 20°C 0.10M U 1988SBb (35109) 43
K(Ge+HL)=17.1
Phosphate buffer pH=6

Ge(IV) sp KNO3 20°C 0.10M U 1986SBb (35110) 44
K(Ge(OH)2+H2L)=4.18
****
C5H4O3 HL Pyromeconic aci CAS 496-63-9 (3600)
3-Hydroxy-4H-pyran-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaCl 25°C 0.50M U 1967CBb (36272) 45
K(Ge(OH)4+2HL=Ge(OH)2L2)=2.86
****
C5H5N L Pyridine CAS 110-86-1 (31)
Pyridine, Azine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) cal non-aq 25°C 100% U H 1967MOb (36638) 46
Medium: n-hexane. DH(GeF4(l)+2L(l)=GeF4L2(c))=-202.3 kJ mol-1, DH(GeF4(g)+
2L(l)=GeF4L2(c))=-224; DH(GeCl4(g)+2L(l)=GeCl4L2(c))=-207. Plus others
****
C5H10NO7P H4L PMIDA CAS 5994-61-6 (2433)
N-(Phosphonomethyl)iminodiethanoic acid; H2O3P.CH2.N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp KNO3 20°C 0.10M U 1988SBb (39676) 47
K(Ge(OH)+HL)=10.4
Phosphate buffer pH 6

Ge(IV) sp KNO3 20°C 0.10M U 1986SBb (39677) 48
K(Ge(OH)2+HL)=6.48
****
C5H10OS2 HL CAS 110-50-9 (591)
(Butoxy)dithiomethanoic acid; CH3.CH2.CH2.CH2O.CSSH

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

Ge(IV) sp KNO3 20°C 0.10M U I 1982SGc (40158) 49
K(Ge(OH)2+2L)=8.82
****
C5H10O4 L Deoxy-Ribose CAS 533-67-5 (7470)
2-Deoxy-D-ribose, 2-Deoxy-D-erythro-pentose;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1979HUa (40327) 50
K(H2GeO3+L)=3.44
****
C5H10O5 L D-Arabinose CAS 10323-20-3 (3606)
D-Arabinose;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1959ATa (40335) 51
K(HGeO3+2L=HGeO(H-2L)2)=3.52
****
C5H10O5 L D-Xylose CAS 58-86-6 (3607)
D-Xylose;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1959ATa (40362) 52
K(HGeO3+2L=HGeO(H-2L)2)=3.38
****
C5H10O5 L L-Arabinose CAS 5328-37-0 (1616)
L-Arabinose

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1959ATa (40370) 53
K(HGeO3+2L=HGeO(H-2L)2)=3.63
****
C6HO3Cl3 HL CAS 69173-78-0 (3668)
Trichlorohydroxy-1,4-benzoquinone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaCl 25°C 0.50M U 1966BBb (42031) 54
K(Ge(OH)4+2HL) < 1.4
****
C6H2N2O8 H2L Nitroanilic aci CAS 479-22-1 (3669)
3,6-Dinitro-2,5-dihydroxy-1,4-benzoquinone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaClO4 25°C 3.0M U 1967BBa (42034) 55
K(Ge(OH)4+2HL=Ge(OH)2L2)=4.9

Medium: LiClO4

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C6H2O4Cl2 H2L Chloranilic acd CAS 87-88-7 (1281)
3,6-Dichloro-2,5-dihydroxy-1,4-benzoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	NaCl	25°C	0.50M	U			1964BBb (42051)	56
							K(Ge(OH)4+2HL)=6.57		
Ge(IV)	sp	KCl	25°C	0.50M	U			1964BBb (42052)	57
							K(Ge(OH)2L2+H)=0.8		

Medium: HCl

Ge(IV)	sp	oth/un	25°C	2.50M	U			1962NFa (42053)	58
							K(Ge(OH)4+HL)=7.64		
							K(Ge(OH)3L+HL)=6.30		
							K(Ge(OH)2L2+HL)=5.65		

****

C6H4N2O6 H2L CAS 7659-29-2 (2694)
1,2-Dihydroxy-3,5-dinitrobenzene; (HO)2.C6H2(NO2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	NaClO4	25°C	0.10M	U			1970NLd (42266)	59
							B3=47.85		

****

C6H4O4 H2L CAS 615-94-1 (1280)
2,5-Dihydroxy-1,4-benzoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	KCl	25°C	0.50M	U			1967BBa (42305)	60
							K(Ge(OH)4+2HL=Ge(OH)2L2)=8.09		
							K(Ge(OH)2L2+H=Ge(OH)2HL2)=1.8		
Ge(IV)	sp	NaCl	25°C	0.50M	U			1966BBb (42306)	61
							K(Ge(OH)4+2HL=Ge(OH)2L2)=9.1		

****

C6H4O5 H2L Comenic acid CAS 499-78-5 (2544)
3-Hydroxypyran-4-one-6-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	NaCl	25°C	0.50M	U			1967CBb (42319)	62
							K(Ge(OH)4+2HL=Ge(OH)2L2)=2.25		

****

C6H4O10S2 H4L Euthiochronic a (3670)
3,6-Disulfo-2,5-dihydroxy-1,4-benzoquinone;

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

---

Ge(IV) sp NaCl 25°C 0.50M U 1967BBa (42333) 63

K(Ge(OH)4+2HL=Ge(OH)2L2)=6.35

****

C6H5NO4 H2L 3-Nitrocatechol CAS 6665-98-1 (2685)

1,2-Dihydroxy-3-nitrobenzene; O2N.C6H3(OH)2

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

---

Ge(IV) sp NaClO4 25°C 0.10M U 1970NLc (42861) 64

B3=59.59

****

C6H5NO4 H2L 4-Nitrocatechol CAS 3316-09-4 (890)

1,2-Dihydroxy-4-nitrobenzene; O2N.C6H3(OH)2

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

---

Ge(IV) sp KCl 25°C 0.10M U 1967PBd (42928) 65

K(Ge(OH)4+3H2L=GeL3+2H)=3.90

****

C6H5O2Cl H2L 4-Cl-Catechol CAS 2138-22-9 (1656)

1,2-Dihydroxy-4-chlorobenzene; Cl.C6H3(OH)2

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

---

Ge(IV) sp NaCl 25°C 0.10M U 1967PBd (43082) 66

K(Ge(OH)4+3H2L=GeL3+2H)=0.65

****

C6H5O4Cl HL Chlorokojic aci (3086)

3-Chloro-5-hydroxy-2-hydroxymethyl-4-pyrone;

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

---

Ge(IV) sp NaCl 25°C 0.50M U 1967CBb (43133) 67

K(Ge(OH)4+2HL=Ge(OH)2L2)=2.33

****

C6H5O4I HL Iodokojic acid CAS 40838-33-3 (3681)

3-Iodo-5-hydroxy-2-hydroxymethyl-4-pyrone;

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

---

Ge(IV) sp NaCl 25°C 0.50M U 1967CBb (43143) 68

K(Ge(OH)4+2HL=Ge(OH)2L2)=2.49

****

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

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Ge(IV)     gl  NaCl   25°C 0.10M M                        1998PSc (43768)  69
K(Ge(OH)4+3H2L=GeL3+2H+4H2O)=-1.39
Method: solubility of GeO2(hex) in 0.1 m NaCl/0.01-0.05 m H2L.
--------------------------------------------------------------------------------
Ge(IV)     gl  oth/un 25°C  0.0  U                        1963ANc (43769)  70
                                        K(HGeO3+3H2L=HGeL3)=8.67
--------------------------------------------------------------------------------
Ge(IV)     gl  KCl    25°C 0.10M U                        1959AMa (43770)  71
                                        K(H2GeO3+3H2L=GeL3+2H)=-0.77
********************************************************************************
C6H6O3                H3L    Pyrogallol       CAS 87-66-1  (696)
1,2,3-Trihydroxybenzene; C6H3(OH)3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ge(IV)     gl  oth/un 25°C  0.0  U                        1963ANc (43961)  72
                                        K(HGeO3+3H3L=HGe(HL)2)=9.05
--------------------------------------------------------------------------------
Ge(IV)     gl  KCl    25°C 0.10M U                        1959AMa (43962)  73
K(H2GeO3+3H3L=Ge(HL)3+2H)=-0.22
********************************************************************************
C6H6O3                 HL    Maltol           CAS 118-71-8  (2442)
3-Hydroxy-2-methyl-4H-pyran-4-one;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ge(IV)     gl  KNO3   20°C 0.10M C                        1979MBf (44088)  74
                                        K(GeO2+2HL=Ge(OH)2L2)=4.2
                                        K(GeO2+3HL+H=GeL3+2H2O)=8.3
--------------------------------------------------------------------------------
Ge(IV)     sp  NaCl   25°C 0.50M U                        1966BBb (44089)  75
                                        K(Ge(OH)4+2HL=Ge(OH)2L2)=3.90
                                        K(Ge(OH)4+3HL+H=GeL3)=8.05
********************************************************************************
C6H6O3                 HL    Allomaltol       CAS 644-46-2  (2688)
5-Hydroxy-2-methyl-4H-pyran-4-one;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ge(IV)     sp  NaCl   25°C 0.50M U                        1967CBb (44127)  76
                                        K(Ge(OH)4+2HL=Ge(OH)2L2)=3.43
********************************************************************************
C6H6O4                 HL    Kojic acid       CAS 501-30-4  (1800)
5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ge(IV)     gl  KNO3   20°C 0.10M C                        1979MBf (44219)  77
                                        K(GeO2+2HL=Ge(OH)2L2)=3.2
                                        K(GeO2+3HL+H=GeL3+2H2O)=6.0
```

```
--------------------------------------------------------------------------------
Ge(IV)     sp  NaCl   25°C 0.50M U                        1967CBb (44220)  78
                                        K(Ge(OH)4+2HL=Ge(OH)2L2)=2.81
********************************************************************************
C6H6O8S2              H4L    Tiron           CAS 149-45-1  (104)
4,5-Dihydroxybenzene-1,3-disulfonic acid; (HO)2.C6H2(SO3H)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ge(IV)     sp  NaCl   25°C 1.00M U  I                     1967PBd (44453)  79
                                        K(Ge(OH)4+2H2L=GeL2)=3.89
                                        K'(Ge(OH)4+3H2L=GeL3+2H)=3.70
K=2.30(I=0.11), 3.10(I=0.26), 3.50(I=0.50)
--------------------------------------------------------------------------------
Ge(IV)     gl  KCl    25°C  var  U                       1966ATc (44454)  80
K(Ge(OH)4+3H2L=GeL3+2H)=-2.307+27.49SQRTI/(1+2.851SQRTI)-0.370I
--------------------------------------------------------------------------------
Ge(IV)     gl  KCl    25°C 0.10M U                        1959AMa (44455)  81
                                        K(Ge(OH)4+3H2L=GeL3+2H)=-2.74
********************************************************************************
C6H8O7                H3L    Citric acid      CAS 77-92-9  (95)
2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCCH2.CH(OH)(COOH).CH2COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ge(IV)     gl  NaCl   25°C 0.10M M                        1998PSc (46126)  82
K(Ge(OH)4+2H3L=Ge(OH)2(H2L)2+2H2O)=6.2, K(Ge(OH)4+H2L=Ge(OH)3HL+H2O)=
2.4. Method: solubility of GeO2(hex) in 0.1 m NaCl/0.02 m H3L.
--------------------------------------------------------------------------------
Ge(IV)     sp  NaNO3  25°C 0.10M U                        1973BPa (46127)  83
                                        K(Ge(OH)2+H3L)=2.01   pH 1-2
********************************************************************************
C6H9NO6               H3L    NTA              CAS 139-13-9  (191)
Nitrilotriethanoic acid; N(CH2.COOH)3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ge(IV)     sp  KNO3   20°C 0.10M U                        1988SBb (46843)  84
                                        K(Ge(OH)2+HL)=4.06
Phosphate buffer pH=6
--------------------------------------------------------------------------------
Ge(IV)     sp  KNO3   20°C 0.10M U                        1986SBb (46844)  85
                                        K(Ge(OH)2+HL)=3.82
--------------------------------------------------------------------------------
Ge(IV)     gl  KNO3   20°C 0.10M U                        1981MMe (46845)  86
                                        K(GeO2+H2L=Ge(OH)2L)=4.42
********************************************************************************
C6H10O7                HL    Glucuronic acid  CAS 6556-12-3  (599)
D-Glucuronic acid;
--------------------------------------------------------------------------------
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	M		K1=1.70	1986HPb (48420)	87

****

C6H11NO5 H2L HIMDA CAS 93-62-9 (192)
N-(2-Hydroxyethyl)iminodiethanoic acid; HO.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	KNO3	20°C	0.10M	U			1988SBb (48739)	88
							K(Ge(OH)2+L)=8.42		

Phosphate buffer pH=6

****

C6H12OS2 HL CAS 123-97-7 (6144)
Pentoxydithiomethanoic acid; C5H11.O.C(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	KNO3	20°C	0.10M	U	I		1982SGc (49411)	89
							K(Ge(OH)2+2L)=8.72		

****

C6H12O5 L L-Rhamnose CAS 634-74-2 (3659)
6-Deoxy-L-mannose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	U			1959ATa (49507)	90
							K(HGeO3+2L=HGeO(H-2L)2)=3.24		

****

C6H12O6 L D-Fructose CAS 57-48-7 (1561)
D-Fructose

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	NaCl	25°C	0.10M	M			1998PSc (49548)	91

K(GeO(OH)3+2L=Ge(OH)(H-2L)2+3H2O)=5.48.
2.4. Method: solubility of GeO2(hex) in 0.1 m NaCl/0.02 m L.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	var	U	I		1963NFa (49549)	92
							K(HGeO3+2L)=4.273+1.155SQRTI		
Ge(IV)	gl	KCl	25°C	0.10M	U			1958ANa (49550)	93
							K(HGeO3+2L=HGeO(H-2L)2)=5.48		

****

C6H12O6 L D-Galactose CAS 59-23-4 (1559)
D-Galactose

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	var	U	I		1963NFa (49565)	94

K(HGeO3+2L)=2.117+1.297SQRTI

Ge(IV) gl KCl 25°C 0.10M U 1958ANa (49566) 95
K(HGeO3+2L=HGeO(H-2L)2)=3.29
****
C6H12O6 L D-Glucose CAS 492-62-6 (1560)
D-Glucose

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KNO3 20°C 0.10M M 1980MBc (49589) 96
K(GeO2+2H2L=Ge(OH)L2+H)=-6.33
K'(Ge(OH)L2+H2L=GeL3+H)=-10.6
For L=D-dulcitol, K=-3.88, K'=-10.0; L=D-adonitol, K=-5.43, K'=-10.6.

Ge(IV) gl KCl 25°C var U I 1963NFa (49590) 97
K(HGeO3+2L)=1.451+1.178SQRTI

Ge(IV) gl KCl 25°C 0.10M U 1958ANa (49591) 98
K(HGeO3+2L=HGeO(H-2L)2)=3.46
****
C6H12O6 L D-Mannose CAS 3458-28-4 (1562)
D-Mannose

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1958ANa (49606) 99
K(HGeO3+2L=HGeO(H-2L)2)=4.13
****
C6H12O6 L Sorbose CAS 87-79-6 (930)
L(-)-Sorbose;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1959ATa (49614) 100
K(HGeO3+2L=HGeO(H-2L)2)=5.35
****
C6H12O6 L Inositol CAS 87-89-8 (2285)
myo-Inositol, meso-Inositol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1967FAa (49638) 101
K(HGeO3+2L=HGeO(H-2L)2)=2.140
****
C6H12O7 HL Gluconic acid CAS 526-95-4 (904)
D-Gluconic acid, 2,3,4,5,6-Pentahydroxyhexanoic acid; HO.CH2(CHOH)4.COOH

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

Ge(IV) gl KCl 25°C 0.10M M K1=2.06 1986HPb (49721) 102
****
C6H13NO6 HL CAS 84518-56-9 (4387)
2-Amino-2-deoxy-D-gluconic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl NaClO4 25°C 0.10M U M 2000KAa (50532) 103
B(GeO(OH)H-1L)=3.01
B(Ge(OH)2(H-1L)2)=6.63
B(GeO(OH)H-2L)=-6.23
B(Ge(OH)(H-1L)2)=14.35
Metal is Ge(OH)4. Also data for ternary species Ge(OH)4ML, M = Zn, Cd, Pb.
****
C6H14O6 L D-Dulcitol CAS 608-66-2 (3663)
D-Galactitol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1959ARa (51061) 104
K(HGeO3+2L=HGeO(H-2L)2)=4.71
****
C6H14O6 L D-Mannitol CAS 69-65-8 (3664)
D-Mannitol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KNO3 20°C 0.10M C 1979MBf (51081) 105
K(GeO2+3H2L=GeL3+2H+2H2O)=-13.7; K(GeO2+2H2L=Ge(OH)L2+H+H2O)=-4.0;
K(Ge(OH)L2+H2O=GeL3+H+H2O)=-9.7

Ge(IV) gl NaCl 25°C 0.50M U 1973PAb (51082) 106
K(Ge(OH)4+L+H2O=GeH-1(OH)4L+H)=-6.43, K(Ge(OH)4+2L+H2O=GeH-1(OH)4L2+H)=-3.95
K(2Ge(OH)4+2L+2H2O=(Ge(OH)4)2H-2L2+2H)=-10.68

Ge(IV) gl KCl 25°C var U 1963NFa (51083) 107
K(HGeO3+2L)=3.394+1.055SQRTI

Ge(IV) gl KCl 25°C 0.10M U 1959ARa (51084) 108
K(HGeO3+2L=HGeO(H-2L)2)=4.53
****
C6H14O6 L Glucitol CAS 50-70-4 (2878)
D-Sorbitol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KNO3 20°C 0.10M C 1979MBf (51103) 109
K(GeO2+3H2L=GeL3+2H+2H2O)=-12.3; K(GeO2+2H2L=Ge(OH)L2+H+H2O)=-3.7;
K(Ge(OH)L2+H2O=GeL3+H+H2O)=-8.6

Ge(IV) gl KCl 25°C 0.10M U 1959ARa (51104) 110
K(HGeO3+2L=HGeO(H-2L)2)=5.09
****
C6H15NO3 Triethanolamine CAS 102-71-6 (447)
Tris-(2-hydroxyethyl)amine; L

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KNO3 20°C 0.10M U 1981MMe (51292) 111
K(GeO2+H3L=Ge(OH)L+H2O)=5.26
****
C7H4O7 H3L Meconic acid CAS 497-59-6 (3723)
3-Hydroxy-4-pyrone-2,6-dicarboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaCl 25°C 0.50M U 1967CBb (52565) 112
K(Ge(OH)4+2HL) < 1
****
C7H6O2 HL Tropolone CAS 533-75-5 (3129)
2-Hydroxycyclohepta-2,4,6-trien-1-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaCl 25°C 0.50M U 1966BBb (53675) 113
K(Ge(OH)4+2HL)=8.03
K(Ge(OH)4+3HL+H)=13.3
****
C7H6O3 H2L CAS 139-85-5 (881)
3,4-Dihydroxybenzaldehyde, protocatechuic aldehyde; C6H3(OH)2.CHO

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M U 1968AOa (54355) 114
K(HGeO3+3H2L)=2.78
****
C8H6O4 H2L CAS 6272-27-1 (4474)
2,3-Dihydro-6,7-dihydroxy-3-oxobenzofuran;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp oth/un 25°C ? U M 1967NPa (58815) 115
K(Ge(OH)2+2H2L=Ge(OH)2L2+4H)=11.4
****
C8H8O3 HL Mandelic Acid CAS 611-72-3 (80)
2-Phenyl-2-hydroxyethanoic acid; C6H5.CH(OH).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) EMF KCl 25°C 0.10M U 1962CLb (59836) 116

K(GeL3+H)=3.83
K(GeHL3+H)=2.53

Ge(IV) con NaCl 18°C 1.0M U 1957VAa (59837) 117
K(H2GeO3+2HL)=2.0

Ge(IV) gl oth/un 18°C 0.0 U 1957VAa (59838) 118
K(H2GeO3+2HL)=2.92
****
C9H5NOCl2 HL CAS 773-76-2 (3278)
5,7-Dichloro-8-hydroxyquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaCl 25°C 0.50M U 1967TMd (63543) 119
K(Ge(OH)4+2HL=Ge(OH)2L2)=6.7
****
C9H6NO4IS H2L Ferron CAS 547-91-1 (275)
7-Iodo-8-hydroxyquinoline-5-sulfonic acid; (HO)(HO3S)C9H4NI

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaCl 25°C 0.50M U 1967TMd (63805) 120
K(Ge(OH)4+2HL=Ge(OH)2L2)=6.78
****
C9H7N L CAS 119-65-3 (487)
Isoquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) cal non-aq 25°C 100% U H 1967MOb (64026) 121
Medium: n-hexane. Many data; DH(GeF4(l)+2L(l)=GeF4L2(c))=-149.2 kJ mol-1
DH(GeF4(g)+2L(l)=GeF4L2(c))=-170.9, DH(GeCl4(l)+2L(l)=GeCl4L2(c))=-93.2
****
C9H7NO HL Oxine CAS 148-24-3 (504)
8-Hydroxyquinoline (8-quinolinol);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaCl 25°C 0.50M U 1967TMd (64279) 122
K(Ge(OH)4+2HL=Ge(OH)2L)=6.61
****
C9H7NO4S H2L Sulfoxine CAS 84-88-8 (448)
8-Hydroxyquinoline-5-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaCl 25°C 0.50M U 1967TMd (64549) 123
K(Ge(OH)4+2HL=Ge(OH)2L2)=6.55
****

C9H28N3O15P5 10L DTPPH CAS 15827-60-8 (2921)
Diethylenetriamine-N,N,N',N",N"-penta(methylphosphonic acid);
H2O3PCH2.N(CH2CH2.N(CH2PO3H2)2)2 H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	KNO3	20°C	0.10M	U			1984SBa (68410)	124
							K(Ge+H6L)=9.45		

****

C10H6O3 HL CAS 83-72-7 (3294)
2-Hydroxy-1,4-naphthoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	NaCl	25°C	0.50M	U			1966BBb (68460)	125
							K(Ge(OH)4+2HL=Ge(OH)2L2) < 3.0		

****

C10H8O5S H3L DHNSA (877)
2,3-Dihydroxynaphthalene-6-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	KCl	25°C	0.10M	U			1967PBd (69849)	126
							K(H2GeO3+3H2L=GeL3+2H)=2.0		

****

C10H8O8S2 H4L Chromotropic ac CAS 148-25-4 (1875)
1,8-Dihydroxynaphthalene-3,6-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KNO3	20°C	0.10M	C			1979MBf (69953)	127
							K(GeO2+3H2L=GeL3+2H+2H2O)=-4.8		
Ge(IV)	sp	KCl	25°C	0.10M	U			1967PBd (69954)	128
							K(H3GeO4+3H2L=HGeL3+2H)=2.30		

****

C10H9NO HL 8-OH-Quinaldine CAS 826-81-3 (998)
2-Methyl-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	NaCl	25°C	0.50M	U			1967TMd (70047)	129
							K(Ge(OH)4+2HL=Ge(OH)2L2)=3.4		

****

C10H9NO4S H2L CAS 29021-67-8 (3926)
2-Methyl-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	NaCl	25°C	0.50M	U			1967TMd (70198)	130

K(Ge(OH)4+2HL=Ge(OH)2L2)=2.2

****

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
Ge(IV)	gl	KNO3	20°C	0.10M	U			1981MMe (73826)	131
							K(GeO2+H3L=Ge(OH)L+H2O)=4.57		
Ge(IV)	EMF	NaCl	25°C	0.50M	U			1969NVa (73827)	132
							K(Ge(OH)4+H4L)=5.3		
Ge(IV)	gl	oth/un	25°C	0.10M	U			1968KMb (73828)	133
							K(Ge(OH)L+H)=2.40		
							K(Ge(OH)4+H4L)=4.80		
							K(Ge(OH)4+H3L)=4.52		
Ge(IV)	vlt	NaClO4	25°C	0.10M	U			1967KOc (73829)	134
							K(Ge(OH)4+H4L=Ge(OH)2H2L)=4.80		
							K(Ge(OH)4+H3L=Ge(OH)2HL)=4.58?		

****

C10H18N2O7 H3L HEDTA CAS 150-39-0 (392)
N-(Hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	NaClO4	25°C	0.10M	U			1969KMe (75409)	135
							K(Ge(OH)4+H3L)=4.44		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	U			1969KMe (79289)	136
							K(GeOHL+H)=2.50		
							K(Ge(OH)4+H4L)=4.78		
							K(Ge(OH)4+H3L)=4.88		

****

C12H9N2O2Cl H2L CAS 29600-20-2 (2638)
4-Chlorobenzene-(1-azo-1')-3',4'-dihydroxybenzene; ClC6H5.N:N.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	oth/un	?	0.01M	U		K1=1.3	1958ISb (80594)	137

****

C12H22O11 L Turanose CAS 547-25-1 (2701)
3-O-D-Glucopyranosyl-D-fructose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	M		K1=2.32 B2=3.25	1986HPb (82866)	138

C12H22O11 L alpha-Lactose CAS 5989-81-1 (2486)
4-D-Beta-D-Galactopyranosyl-alpha-D-glucose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	M		K1=1.97	1986HPb (82875)	139

C12H22O11 L Maltose CAS 6363-53-7 (2705)
4-O-alpha-D-Glucopyranosyl-D-glucose, Maltobiose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	M		K1=1.48	1986HPb (82880)	140

C12H22O11 L Cellobiose CAS 528-50-7 (2697)
4-O-beta-D-Glucopyranosyl-D-glucose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	M		K1=1.58	1986HPb (82886)	141

C12H22O11 L Melibiose CAS 66009-10-7 (2699)
6-O-D-Galactopyranose-D-glucose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	M		K1=2.32 B2=3.24	1986HPb (82890)	142

C12H22O11 L Gentiobiose CAS 554-91-6 (2698)
6-O-D-Glucopyranosyl-D-glucose, Amygdalose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	M		K1=1.27	1986HPb (82893)	143

C12H22O11 L Trehalose CAS 6138-23-4 (2700)
D-Glucopyranosyl-D-glucopyranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	gl	KCl	25°C	0.10M	M		K1=1.12	1986HPb (82900)	144

C12H22O11 L Sucrose CAS 57-50-1 (2523)
beta-D-Fructofuranosyl-alpha-D-glucopyranoside; Saccharose;

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

---
Ge(IV) gl KCl 25°C 0.10M M K1=1.00 1986HPb (82910) 145
****
C12H24O11 L Maltitol CAS 585-88-6 (2709)
4-O-alpha-D-Glucopyranosyl-D-glucitol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M M K1=3.22 1988HLa (83683) 146
****
C12H24O11 L Lactitol CAS 535-94-4 (2710)
4-O-beta-D-Galactopyranosyl-D-glucitol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) gl KCl 25°C 0.10M M K1=3.08 1988HLa (83686) 147
****
C14H8O7S H3L DASA CAS 83-61-4 (950)
1,2-Dihydroxyanthraquinone-3-sulfonic acid, Alizarin Red S;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp oth/un 25°C 0.10M U 1972NFb (86732) 148
B3=52.80
Medium: acetate
****
C15H11N3O HL PAN CAS 85-85-8 (572)
1-(2-Pyridylazo)-2-naphthol; C5H4N.N:N.C10H6.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp oth/un 27°C ? U M 1974ZSa (91219) 149
Keff(GeCl4+L)=3.3
****
C18H12O6 H2L (4124)
2,5-Dihydroxy-3,6-diphenoxy-1,4-benzoquinone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaCl 25°C 0.50M U 1967BBa (96886) 150
K(Ge(OH)4+2HL=Ge(OH)2L2)=8.8
****
C19H12O9Br2S H6L Bromo Pyrog.Red CAS 16574-43-9 (706)
5',5"-Dibromopyrogallolsulfonephthalein;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ge(IV) sp NaNO3 ? 0.10M U 1969NMa (99011) 151
K(Ge(OH)3+3H2L)=12.9
****

C22H20O13 H5L Carminic acid CAS 1260-17-9 (714)
Carminic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	oth/un	25°C	?	U		1970BRa (101702)		152
							K(Ge(OH)4+H5L)=4.58		

Medium: conc H2SO4

****

C28H15NO4 L CAS 82-22-4 (3522)
1,1'-Iminodianthraquinone; (1,1'-dianthrimide)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ge(IV)	sp	mixed	?	93%	U		1968LNa (104653)		153
							K(HGeO2+HL)=2.35(?)		

Medium: 93.2% H2SO4

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EXPLANATORY NOTES

DATA Flags are :-

T Data at other TEMPERATURES

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        I  Data with various BACKGROUNDS
        H  Data for THERMOCHEMICAL quantities
        M  Data for TERNARY Complexes


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END Experiments recorded for
    from SC-Database on Saturday, 01 January, 2000 at 00:45:09
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