SC-Database
Software version = 5.81 Data version = 4.62
Experiment list contains 899 experiments for
 (no ligands specified)
 Metal : Li+
 (no references specified)
 (no experimental details specified)

****

e- HL Electron (442)

Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	EMF	mixed	25°C	10%	U	I	K(Li+e=Li(s))=-51.40(-3041mV)	1974DKb (627)	1
Medium: 10% w/w DMSO/H2O; K=-51.30(-3.035V,20%), -50.97(-3.015V,40%), -50.75(-3.002V,60%)									
Li+	oth	mixed	25°C	0.0	U	I	K(Li+e+Li(s))=-50.73(3001mV)	1972COa (628)	2
Method: Estimated.K(Li+e=Li(s)).MeOH: -53.86(-3.186V).EtOH: -53.13(-3.143V) BuOH: -54.21(-3.207V).PentylOH: -54.58(3.229V).Me2CO: -54.21(-3.207V)									
Li+	oth	none	25°C	0.0	U	I	K(Li+e=Li(s))=-50.73(3001mV)	1972COa (629)	3
Method: Estimated. MeCN: -56.05(-3.316V).HCOOH: -59.72(-3.533V) Also NH3 and N2H4									
Li+	con	non-aq	-71°C	100%	U		K(Li + e(solv))=2.72 K(2Li=Li2)=1.95	1972DBa (630)	4
Medium: NH3(liquid). Method:conductivity and magnetic susceptibility									
Li+	EMF	mixed	25°C	30%	U	I	K(Li+e=Li(s))=-51.32(-3036mV)	1972KRb (631)	5
Med.:30% w/w ethylene glycol/H2O; K=-51.18(-3.028V,50%), -50.95(-3.014V,70%) -51.15(-3.026V,90%), -52.35(-3.097V,100%)									
Li+	EMF	non-aq	25°C	100%	U	I	K(Li+e=Li(s))=-52.08(-3081mV)	1972KRc (632)	6
Medium: 30% w/w propylene glycol/MeOH. 0% Pr Glycol: K=-52.30(-3.094V) 50%: -52.00(-3.076V). 70%: -51.96(-3.074V). 100%: -52.00(-3.076V)									
Li+	EMF	none	25°C	0.0	M		K(Li+e=Li(s))=-51.39,-3040.1mV	1968HBb (633)	7
Li+	EMF	none	25°C	0.0	U		K(Li+e=LiHg)=-36.99, -2188 mV	1967BHc (634)	8

```
Li+        EMF none   25°C  0.0  M                        1967BHc   (635)   9
                                        K(Li+e=LiHg)=-37.13,-2196.3 mV
-------------------------------------------------------------------------------
Li+        EMF non-aq 25°C 100%  U                        1966LCa   (636)  10
                                        K'=-52.806, -3123.7 mV
Medium: CH3NHCHO. K': Li + Cl + Ag(s) = Li(s) + AgCl(s)
-------------------------------------------------------------------------------
Li+        oth none   25°C  0.0  U                        1952LAb   (637)  11
                                        K(Li+e)=-51.47(-3045 mV)
-------------------------------------------------------------------------------
Li+        EMF none   25°C  0.0  U                        1923LRa   (638)  12
                                        K(Li+e=Li(s))=-50.02(-2957.8mV
*******************************************************************************
AsF6-                   L                        (8856)
Tetrafluoroarsenate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C        K1=1.716       2002DDa  (1040)  13
Medium: N,N-dimethylacetamide, 0.005-0.015 M LiAsF6.
*******************************************************************************
BF4-                    HL                       (2497)
Tetrafluoroborate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C        K1=1.477       2002DDa  (1195)  14
Medium: N,N-dimethylacetamide, 0.005-0.015 M LiBF4.
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C T      K1=2.50        2000VMa  (1196)  15
Medium: 2-Methoxyethanol. Data for 15-35 C.
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C        K1=8.30        1997CHb  (1197)  16
                                        B(Li2BF4)=10.10
Medium: THF. By conductivity, species M2L and L2M are equivalent.
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=1.00        1991MHa  (1198)  17
Medium: propylene carbonate
*******************************************************************************
BO4H4-                  HL    Borate           CAS 10043-35-3  (991)
Borate; B(OH)4-
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        EMF oth/un 25°C  0.0  C T H    K1=1.09        2000ZSb  (1313)  18
Medium: 0.007-0.23 M LiCl.  Method: Pt/H2 electrode. DH(K1)=0.64 kJ mol-1,
DS(K1)=22.9 J K-1 mol-1.
-------------------------------------------------------------------------------
Li+        sp  oth/un 25°C 1.00M U  I     K1=0.73        1990RAa  (1314)  19
Medium: LiCl. Data at I=0 M and at pressures to 2041 atmos.
```

Li+ gl NaCl 25°C 0.70M U K1=-0.05 1988RBa (1315) 20
****
Br- HL Bromide CAS 10035-10-6 (19)
Bromide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% C K1=1.520 2002DDa (2083) 21
Medium: N,N-dimethylacetamide, 0.005-0.015 M LiBr.

Li+ con non-aq 25°C 100% C K1=10.53 1997CHb (2084) 22
B(Li2Br)=13.33
K(2LiBr=Li2Br2)=1.70
Medium: THF. By conductivity, species M2L and L2M are equivalent.

Li+ con non-aq 25°C 100% U T K1=2.23 1993TAa (2085) 23
Medium: 2-methoxyethanol, -10 to 80 C

Li+ con non-aq 25°C 100% U K1=4.71 1982GRb (2086) 24
Medium: octanol

Li+ con non-aq 25°C 100% U K1=0.76 1974HPb (2087) 25
Medium: hexamethylphosphotriamide. K1 by Pitts eqn. K1=1.13 (Fuoss-Hsia eqn)

Li+ con mixed 25°C 0.10M U I K1=3.53 1973BHa (2088) 26
In 99.9% w/w acetone/H2O. K1=3.62(100%),3.44(99.7%),3.38(99.4%),3.32(99%),
3.21(98.5%),3.12(98%),2.96(97%),2.67(95%),2.15(90%),1.44(80%)

Li+ con mixed 25°C 0.1% U I K1=3.54 1973NIa (2089) 27
Medium: 0.1% w/w MeOH/acetone. K1=3.42(0.3%), 3.19(1%), 3.03(2%), 2.78(5%),
2.50(=10%), 2.02(20%), 0.79(50%)

Li+ con non-aq 25°C 100% U K1=4.98 1973TKb (2090) 28
Medium: liquid SO2

Li+ kin mixed 25°C 0.00 U I K1=3.56 1972HBa (2091) 29
In 99.995% w/w acetone/H2O.K1=3.54(99.894%),3.40(99.695%),3.32(99.395%),
3.36(98.995%),3.28(98.495%). Data also by conductivity

Li+ con non-aq 25°C 100% U K1=1.26 1971BCa (2092) 30
Medium: tetramethylurea

Li+ kin non-aq 25°C 100% U K1=3.63 1970BIa (2093) 31
Medium: acetone. By conductivity :K1=3.67

Li+ EMF non-aq 25°C 100% U K1=0.40 1970SAb (2094) 32
Medium: propene carbonate

Li+ con non-aq 25°C 100% U K1=1.28 1969MBf (2095) 33

Medium: propene carbonate(0 corr)

Li+ con diox/w 25°C 50% U TI K1=1.11 1969SMe (2096) 34

In 50% w/w dioxan/H2O. K1=1.78(70%),3.08(77.5%). At 50 C: K1=1.63(50%), 3.34(70%),4.76(77.5%). Also 30, 35 and 40 C

Li+ con non-aq 40°C 100% U T K1=2.90 1967SMb (2097) 35

Medium:Me2CO. K1=2.80(25 C),2.77(30 C),2.85(35 C); also Me2CO-H2O mixtures

---

Li+ con non-aq 25°C 100% U K1=3.66 1966SAa (2098) 36

Medium: acetone

Li+ con alc/w 25°C 100% U K1=1.19 1966SMc (2099) 37

Medium:MeOH, also K1 values for MeOH-H2O mixtures

Li+ con non-aq 25°C 100% U K1=3.18 1965BFb (2100) 38

Medium: diaminoethane

Li+ oth non-aq 35°C 100% U 1964TRb (2101) 39

K(2Li2Br2=Li4Br4)=1.3

Method:boiling point. Medium:Et2O

Li+ kin non-aq 0°C 100% U K1=0.41 1964WHa (2102) 40

Medium:DMF

Li+ con non-aq 0°C 100% U K1=4.58 1960LRb (2103) 41

Medium: liquid SO2, I=0 corr., 0.22 C

Li+ oth non-aq 16°C 100% U 1959KEb (2104) 42

K(2LiBr=Li2Br2)=0.66

Method: freezing point; medium: CH3CO2H; m units.

Li+ con non-aq 30°C 100% U K1=6.14 1954JGa (2105) 43

Medium: CH3CO2H

****

BrO3- HL Bromate (6017)

Bromate;

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

---

Li+ sol NaClO4 25°C 0.15M U I K1=-0.77 1963RSe (2422) 44

Medium: LiClO4. K1=-0.82 (I=0.20)

****

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

Carbonate;

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

---

Li+ sol oth/un 40°C var U T 1958MLa (3261) 45

K(Li2L+CO2(g)=2Li+2HL)=-0.23

K=-2.63(200 C), -3.68(250 C), -4.91(290 C), m units

Li+ sol oth/un 20°C var U 1958VGa (3262) 46
Kso(Li2CO3(s))=-1.6

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	oth/un	25°C	0.10M	C	TIH	K1=1.37 B(Li2Fe(CN)6)=1.69 B(LiHFe(CN)6)=4.38	1986CDc (3584)	47

Data for 10-35 C and 0.05-1.0 M LiCl. DH(K1)=23.4 kJ mol-1, DS(K1)=117 J K-1 mol-1; DH(Li2Fe(CN)6)=9.62, DS=88; DH(LiHFe(CN)6)=20.1, DS=176.

Li+ EMF oth/un 25°C U K1=1.95 1969NSa (3585) 48
Assuming K(Li+Fe(CN)6)=1.3

Li+ oth oth/un 25°C 0.0 U K1=1.78 1966NSa (3586) 49
Medium: 0 corr. Method: electrical migration or transference number

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C		K1=1.660	2002DDa (5163)	50

Medium: N,N-dimethylacetamide, 0.005-0.015 M LiCl.

Li+ con non-aq 25°C 100% U I K1=1.5 1982GCb (5164) 51
Medium: DMF

Li+ con diox/w 25°C ? U K1=-0.092 1975MFa (5165) 52
Data for dioxan/H2O solution with a dielectric constant of 78.35
Further data available for solutions with varying dielectric constants

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Li+ ISE non-aq 25°C 100% U K1=5.3 1974BMf (5166) 53
Medium: tributylphosphate

Li+ oth non-aq 25°C 100% U 1974GRa (5167) 54
Kd(2LiCl=Li2Cl2)=2.26
Medium: octanoic acid. Method: permittivity

Li+ con non-aq 25°C 100% U K1=1.27 1974HPb (5168) 55
Medium: hexamethylphosphotriamide, using Pitts equation. Using Fuoss-Hsia equation, K1=1.24

Li+ con non-aq 25°C 100% U K1=0.61 1972SKb (5169) 56
Medium: isopentylalcohol

Li+ con non-aq 25°C 100% U K1=5.55 1971BHa (5170) 57
Medium: acetone

Li+ con non-aq 25°C 100% U K1=2.2 1971ENa (5171) 58
Medium: trifluoroethanol, K1=2.11 to 2.28

Li+ con non-aq 25°C 100% U K1=2.32 1971ETa (5172) 59
Medium: propanol, also acetone-propanol mixtures. In 100% acetone: K1=5.32

Li+ oth non-aq 37°C 100% U 1971HMb (5173) 60
Kd(2LiCl=Li2Cl2)=0.4
Medium: ethanoic acid. Method: vapor phase osmometry

Li+ con non-aq 25°C 100% U K1=0.18 1971PGa (5174) 61
Medium: N-methylformamide

Li+ EMF non-aq 25°C 100% U K1=1.70 1970SAb (5175) 62
Medium: propene carbonate

Li+ kin non-aq 25°C 100% U K1=5.55 1969BEa (5176) 63
Medium: acetone. By conductivity: K1=5.47

Li+ con alc/w 25°C 43% U I K1=0.40 1969DPa (5177) 64
Medium: 43.5% w/w EtOH/H2O. K1=0.49(57.1%), 0.68(68.2%), 0.88(77.2%), 1.02(86.6%), 1.20(92.3%), 1.43(100%)

Li+ con non-aq 25°C 100% U K1=2.75 1969MBf (5178) 65
Medium: propene carbonate

Li+ oth alc/w 25°C 100% U K1=0.5 1967MIc (5179) 66
Method: from literature data. Medium: MeOH. K1=1.43(EtOH), 2.2(i-PrOH), 2.3(i-BuOH), 3(acetone)

Li+ con non-aq 25°C 100% U K1=5.48 1966SAa (5180) 67
Medium: acetone

Li+ oth non-aq 18°C 100% U K1=0.7 1965DGa (5181) 68
Method:freezing point. Medium: DMSO

Li+ kin non-aq 0°C 100% U K1=0.74 1964WHa (5182) 69
Medium:DMF

Li+ con non-aq 20°C 100% U K1=5.3 1963MSd (5183) 70
Medium:TBP,(BuO)3PO

Li+ gl diox/w 25°C 70% U K1=2.54 1963PGb (5184) 71

Li+ con non-aq 25°C 100% U K1=4.27 1962SHd (5185) 72
Medium: CH3COOH. By EMF K1=3.98

```
--------------------------------------------------------------------------------
Li+        con mixed  25°C  90%  U        K1=2.3         1961AMc  (5186)  73
Medium: 90% acetone/H2O
--------------------------------------------------------------------------------
Li+        oth non-aq 16°C 100%  U                       1959KEb  (5187)  74
                                          K(2LiCl=Li2Cl2)=0.44
Method: freezing point in CH3COOH, m units.
--------------------------------------------------------------------------------
Li+        con alc/w  25°C 100%  U        K1=1.75        1957GKa  (5188)  75
Medium: EtOH
--------------------------------------------------------------------------------
Li+        EMF non-aq 25°C 100%  U        K1=7.08        1956BKa  (5189)  76
Medium: CH3COOH
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=7.13        1953SEa  (5190)  77
Medium: CH3COOH
--------------------------------------------------------------------------------
Li+        con non-aq 30°C 100%  U T      K1=4.14        1952CSa  (5191)  78
Medium: cyclohexanol. K1=4.21(35 C)
********************************************************************************
ClO3-                  HL    Chlorate         CAS 7790-93-4  (971)
Chlorate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con diox/w 25°C  90%  U  I     K1=6.42        1966CKa  (6046)  79
K1=1.42(64.5% dioxan)
********************************************************************************
ClO4-                  HL    Perchlorate      CAS 7001-90-3  (287)
Perchlorate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C        K1=1.349       2002DDa  (6290)  80
Medium: N,N-dimethylacetamide, 0.005-0.015 M LiClO4.
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  M        K1=1.26        1999DSd  (6291)  81
Medium: acetonitrile.
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C  I     K1=7.34        1997CHb  (6292)  82
                                          B(Li2ClO4)=8.99
Medium: THF. By conductivity, species M2L and L2M are equivalent.
Also data for dimethoxyethane, ethyl acetate and THF/2-ethyl-1-hexanol.
--------------------------------------------------------------------------------
Li+        gl  non-aq 25°C 100%  U   H    K1=5.11        1981TMb  (6293)  83
Medium: Glacial acetic acid. Alternative method: Spectrophotometry.
DH(K1)=-52 kJ mol-1
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=7.68   B2=9.85   1979CCa  (6294)  84
Medium: THF
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-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=1.20        1978CAa  (6295)  85
Medium: Acetonitrile
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=5.09        1977BIb  (6296)  86
Medium: - tributylphosphate
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=0.20        1974HPb  (6297)  87
Medium: hexamethylphosphotriamide. K1 by Pitt eqn. By Fuoss-Hsia: K1=1.13
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U T      K1=7.68        1974JPa  (6298)  88
                                         KT=K(LiL+Li)=2.18
Medium: THF. At -15 C: K1=7.18, KT=2.14; -30 C: K1=6.97, KT=2.12
-------------------------------------------------------------------------------
Li+        oth non-aq 25°C 100%  U T H    K1=-0.51       1974PKc  (6299)  89
Medium: acetone. DH(K1)=3.68 kJ mol-1. K1=-0.92(-90 C), -0.70(-45 C),
-0.64(-25 C), -0.57(0 C), -0.39(45 C). Method: infrared spectra
-------------------------------------------------------------------------------
Li+        con mixed  25°C  15%  U  I     K1=2.55        1974SPc  (6300)  90
Medium 15% w/w THF/H2O. K1=2.59(30%),2.56(40%),2.24(50%),2.39(60%),2.59(70%)
2.57(80%),3.16(90%),3.97(95%),4.36(97%),4.39(98%),4.84(100%)
-------------------------------------------------------------------------------
Li+        con alc/w  25°C 100%  U        K1=1.14        1972DAa  (6301)  91
Medium: MeOH
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=0.51        1972SKb  (6302)  92
Medium: isopentylalcohol
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=3.23        1971BHa  (6303)  93
Medium: acetone
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=0.18        1971PGa  (6304)  94
Medium: N-methylformamide
-------------------------------------------------------------------------------
Li+        con mixed  25°C  80%  U  I     K1=1.75        1970ALa  (6305)  95
Medium: 80% w/w t-butanol/H2O. K1=2.25(85%),3.08(90%),3.87(95%),4.12(97%)
-------------------------------------------------------------------------------
Li+        EMF mixed  25°C 0.10M U  I     K1=4.41        1970DCa  (6306)  96
Medium: dimethoxy-1,2-ethane, 0.1 M H2O. K1=4.2(H2O conc.:0.01 M)
-------------------------------------------------------------------------------
Li+        EMF non-aq  rt  100%  U        K1=4.5         1969BEb  (6307)  97
Medium: CF3COOH
-------------------------------------------------------------------------------
Li+        EMF non-aq 25°C 100%  U                       1968MKa  (6308)  98
                                         K1(Li+)/K1(H+)=1.12
Method: H electrode. Medium: pyridine
-------------------------------------------------------------------------------
Li+        EMF non-aq 20?°C 100%  U        K1=0          1967PBa  (6309)  99
Method: H electrode. Medium:C4H8O, 0.1 M Bu4NClO4
-------------------------------------------------------------------------------
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Li+        con non-aq 25°C 100%  U T      K1=1.54        1966MWb  (6310) 100
Medium: MeCN, also at 20 C, 30 C
--------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=1.83        1962MWa  (6311) 101
Medium:MeCN
--------------------------------------------------------------------------
Li+        oth non-aq 16°C 100%  U                       1959KEb  (6312) 102
                                          K(2LiL=Li2L2)=0.89
Method: freezing point. Medium: CH3CO2H, m units
**************************************************************************
CrO4--                H2L    Chromate         CAS 7738-94-5  (2382)
Chromate;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        oth oth/un 25?°C  0.0  U        K1=0.7         1966MBb  (6496) 103
**************************************************************************
F-                     HL    Fluoride         CAS 7644-39-3  (201)
Fluoride;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        sp  oth/un 25°C  1.0M U  I     K1=0.34        1993MAa  (6997) 104
K1 values over a range of pressures and ionic strengths
--------------------------------------------------------------------------
Li+        ISE NaClO4 25°C  1.0M U TI     K1=-0.12       1984CTd  (6998) 105
--------------------------------------------------------------------------
Li+        ISE NaClO4 25°C 1.00M C  I     K1=-0.12       1984HCa  (6999) 106
Also in 1.0 M KNO3 (K1=-0.03) and 1.0 M NaNO3 (K1=-0.24).
--------------------------------------------------------------------------
Li+        oth oth/un 25°C    ?  U        K1=0.25        1981ASa  (7000) 107
--------------------------------------------------------------------------
Li+        ISE NaNO3  25°C  1.0M U        K1=2.90   B2=3.67   1968SRd  (7001) 108
Method: F membrane electrode
--------------------------------------------------------------------------
Li+        dis oth/un 25°C  0.0  U                       1964KYa  (7002) 109
                                          Kd=1.81
Kd: Li+F=Li(in BuOH)+F(in BuOH). Kd=3.84(Na+),3.86(K+),3.53(Cs+),3.69(NH4+)
--------------------------------------------------------------------------
Li+        cal oth/un 25°C  0.0  U   H                   1964SHb  (7003) 110
                                          Kso=-2.77
DH(so)=4.5 kJ mol-1
**************************************************************************
H2O                     L    Water            CAS 7732-18-5  (6115)
Water
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        oth non-aq 25°C 100%  U  I     K1=0.81   B2=1.47   1974BLa  (7596) 111
Method: partial pressure. Medium: propene carbonate. In sulfolane: K1=0.65,
```

K2=0.5. In DMSO, K1=-0.7 (by N.M.R.)

Li+ nmr non-aq 36°C 100% U K1=0.81 B2=1.24 1971CBc (7597) 112
K3=0.28
Method:N.M.R.,Medium:Propene carbonate

Li+ sol non-aq 25°C 100% U K1=0.5 B2=0.7 1967CKa (7598) 113
Medium: MeCN

Li+ sp alc/w 25°C 100% U I K1=0.18 1953BJa (7599) 114
Medium: MeOH. Maximum value of n is 3 or 4. In EtOH K1=-0.3
****
I- HL Iodide CAS 10034-85-2 (20)
Iodide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% C K1=1.478 2002DDa (8219) 115
Medium: N,N-dimethylacetamide, 0.005-0.015 M LiI.

Li+ oth diox/w 25°C 80% U I K1=2.23 1981ASa (8220) 116
K1=-0.21 in water

Li+ oth diox/w 25°C ? U K1=-0.21 1975MFa (8221) 117
Data for dioxan/H2O solution with a dielectric constant of 78.35
Further data available for solutions with varying dielectric constants
---
Li+ con non-aq 25°C 100% U K1=0.48 1974HPb (8222) 118
Medium: hexamethylphosphotriamide. Calculated using Pitts eqn. By Fuoss-Hsia
K1=1.11

Li+ con non-aq 25°C 100% U K1=4.22 1973TKb (8223) 119
Medium: liquid SO2

Li+ dis oth/un 25?°C 0.0 U 1967RMe (8224) 120
Kd(Li+I=Li(TBP)+I(TBP))=-0.54
In (i-amylO)2MePO: Kd=-1.03

Li+ dis oth/un 25?°C 0.0 U 1967RMe (8225) 121
Kd(Na+I=Na(TBP)+I(TBP))=-1.32
In (i-amylO)2MePO: Kd=-1.52

Li+ con diox/w 25°C 40% U I K1=-0.82 1966AMb (8226) 122
K1=0.40(60% dioxan), 1.38(70%), 2.28(80%), 2.82(87%), 3.85(91%), 4.50(95%)

Li+ con non-aq 25°C 100% U K1=2.16 1966SAa (8227) 123
Medium: acetone

Li+ con non-aq 25°C 100% U K1=2.97 1965BFb (8228) 124
Medium: diaminoethane

```
--------------------------------------------------------------------------------
Li+        kin non-aq  0°C 100%  U        K1=0.26        1964WHa  (8229) 125
Medium: DMF
--------------------------------------------------------------------------------
Li+        oth non-aq 16°C 100%  U                       1959KEb  (8230) 126
                                          K(2LiI=Li2I2)=1.11
Method: freezing point. Medium: CH3CO2H, m units
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U  I     K1=2.56        1957HUa  (8231) 127
Medium: EtCOMe. In PhCOMe K1=2.17
********************************************************************************
MoO4--                H2L    Molybdate          (443)
Molybdate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        sp  oth/un 25°C    ?  U    M                   1997STa  (8740) 128
                                          K(H2L+2Li=Li2L+2H)=-3.3
Ligand: nano-Molibdenomanganate, MnMo9O32------
********************************************************************************
NH3                    L    Ammonia          CAS 7664-41-7  (414)
Ammonia
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        gl  diox/w 25°C  2.0M U        K1=-0.01  B2=-0.06  1992MPa  (9175) 129
                                          K1=-0.28(100%H2O)
                                          K3=-1.10(100%H2O)
                                          K2=-0.76(100% H2O)
                                          K4=-1.50 (100%H2O)
Medium: NH4NO3 in 40% v/v dioxane/H2O; for 20% K1=-0.13; K2=-0.65
For 2 M NH4NO3 in40%v/v ethanol/H2O K1=-0.10; K2=-0.58
--------------------------------------------------------------------------------
Li+        gl  oth/un 25°C  2.0M U   H    K1=-0.28  B2=-1.04  1991MPa  (9176) 130
                                          K3=-1.1
Medium: NH4NO3; the same measured by cal. K1=-0.3;K2=-0.8; K3=-1.3
Also by extraction: K1=-0.32; K2=-0.8; K3=-1.2; K4=-1.6
--------------------------------------------------------------------------------
Li+        cal oth/un  rt   dil  U   H                   1952FYa  (9177) 131
DH(B3?)=-2.1 kJ mol-1; DS(B3?)=-52.7.
--------------------------------------------------------------------------------
Li+        gl  R4N.X  23°C  2.0M U        K1=-0.3   B2=-1.1   1941BJa  (9178) 132
                                          K3=-1.3
Medium: NH4NO3.
********************************************************************************
NO2-                   HL    Nitrite          CAS 7782-77-6  (635)
Nitrite;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Li+        con oth/un 25°C  0.0  U        K1=-0.04       1964PSh  (9386) 133
********************************************************************************
NO3-                   HL    Nitrate          CAS 7697-37-2  (288)
Nitrate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C  I     K1=10.88       1997CHb  (9747) 134
                                         B(Li2NO3)=14.17
Medium: THF. Also data for dimethoxyethane and THF/2-ethyl-1-hexanol
mixtures. By conductivity, species M2L and L2M are equivalent.
--------------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  U        K1=-0.187      1979ITa  (9748) 135
Medium: N,N-Dimethylacetamide. Method: Raman spectroscopy
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=0.72        1974HPb  (9749) 136
Medium: Hexamethylphosphotriamide. Using Pitts equation. Using Fuoss-Hsia eq
K=1.18
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=3.35        1974PHb  (9750) 137
Medium: MeCN
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=9.77        1973WHa  (9751) 138
                                         K(LiL+Li)=2.3
Medium: THF
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=0.58        1972SKb  (9752) 139
Medium: Isopentyl alcohol
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=2.22        1971BCa  (9753) 140
Medium: Tetramethylurea
--------------------------------------------------------------------------------
Li+        sp  oth/un       var  U        K1=-0.6        1971INb  (9754) 141
Method: Raman spectra
--------------------------------------------------------------------------------
Li+        con diox/w 25°C  72%  U  I     K1=1.59        1969SBe  (9755) 142
In 74.6% dioxan: K1=2.12, 75.9%: 2.43, 77.8%: 2.76
--------------------------------------------------------------------------------
Li+        EMF non-aq 25°C 100%  U                       1968MKa  (9756) 143
                                         K1(Li+)/K1(H+)=0.91
Method: H electrode. Medium: C5H5N
--------------------------------------------------------------------------------
Li+        ix  mixed  23°C  90%  U        K1=-0.54       1966WFa  (9757) 144
Medium: 90% i-PrOH, 0.5 M HL
--------------------------------------------------------------------------------
Li+        con alc/w  25°C 100%  U        K1=1.28        1963PSa  (9758) 145
Medium: EtOH, I=0 corr.
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=3.39        1961KBa  (9759) 146
Medium: MeCN
```

```
--------------------------------------------------------------------------------
Li+        oth non-aq 16°C 100%  U                      1959KEb  (9760) 147
                                          K(3LiL=Li3L3)=1.1
Method: Freezing point. Medium:CH3CO2H
--------------------------------------------------------------------------------
Li+        sp  oth/un 30°C  0.0  U        K1=-1.45       1928HEa  (9761) 148
********************************************************************************
OH-                    HL    Hydroxide          (57)
Hydroxide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        nmr R4N.X  25°C  3.4M C        K1=-0.1        2002PLa (11701) 149
method: NMR Li-7
Medium: 3.4 M Me4NCl/Me4NOH
--------------------------------------------------------------------------------
Li+        EMF non-aq 25°C 100%  U        K1=11.0        1967PBa (11702) 150
Medium: THF, 0.1 M Bu4NClO4. H electrode
--------------------------------------------------------------------------------
Li+        EMF NaClO4 25°C 3.00M U  I     K1=-0.18       1964OHa (11703) 151
At I=0 corr.: K1=-0.1
--------------------------------------------------------------------------------
Li+        EMF NaClO4 25°C  3.0M C        K1=-0.2        1964PCa (11704) 152
                                          *K1=-14.4
Method: H electrode
--------------------------------------------------------------------------------
Li+        con none   49°C  0.0  U T      K1=0.89        1961WLa (11705) 153
K1=1.13(93 C),1.51(138 C),1.42(182 C),1.59(227 C),1.76(271 C)
--------------------------------------------------------------------------------
Li+        EMF none   25°C  0.0  C T      K1=0.17        1954GMb (11706) 154
K1=0.26(5 C),0.20(15 C),0.19(35 C),0.19(45 C). Method: H electrode
--------------------------------------------------------------------------------
Li+        con none   25°C  0.0  U        K1=-0.08       1942DMa (11707) 155
********************************************************************************
PO4---                 H3L    Phosphate        CAS 7664-38-2  (176)
Phosphate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        gl  oth/un 37°C 0.15M C        K1=0.95        1983DGa (13238) 156
                                          K(Li+HL)=0.79
                                          K(Li+H2L)=0.2
--------------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.20M U T HM                  1956SAc (13239) 157
                                          K(Li+HL)=0.72
Medium: Pr4NCl, K=0.32(0 C). DH(K)=25.1 kJ mol-1, DS=100 J K-1 mol-1
********************************************************************************
P2O6----               H4L    Hypophosphate    CAS 9803-60-3  (199)
Hypophosphate;
--------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.50M U        K1=0.82        1967CMc (13415) 158
Ligand: O3POPHO2---, Medium: Me4NCl
**************************************************************************
P2O7----              H4L    Pyrophosphate    CAS 2466-09-3  (198)
Diphosphate; from (HO)2PO.O.PO(OH)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        cal R4N.X   5°C 1.00M U   H                    1973VAa (13615) 159
Medium: Me4NNO3, DH(K1)=1.3 kJ mol-1. 35 C, I=0, DH(K1)=4.2. DH(Li+HL)=-0.8
--------------------------------------------------------------------------
Li+        gl  none   25°C  0.0  U T      K1=3.1         1959WOa (13616) 160
K1=3.3(40 C)
--------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 1.00M U        K1=2.39        1957LWa (13617) 161
                                         K(Li+HL)=1.03
Medium: Me4NCl
**************************************************************************
P2O8----              H4L                      CAS 13825-81-5  (2402)
Peroxodiphosphate, also cyclic metaposphates, thiophosphates etc.;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        kin NaNO3  65°C  1.0M C                        1985GGb (13692) 162
                                         K(Li+HP2O8)=0.92
Ligand is peroxydisulfate, S2O8----
--------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 1.00M U        K1=1.34        1960CEa (13693) 163
                                         K(Li+HL)=0.70
Medium: Me4NCl
**************************************************************************
P2W17O61----------           Polytungstate      (2102)
alpha-Heterodiphospho-polytungstate (usually alpha1 isomer)
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        gl  R4N.X  25°C  1.0M U        K1=3.61        1982CCb (13724) 164
                                         K(Li+HL)=3.77
                                         K(Li+H2L)=2.0
alpha2 isomer. For alpha1 isomer, K1>3.7, K(Li+HL)=1.6, K(Li+H2L)=0.6
**************************************************************************
P3O10-----            H5L                      CAS 10380-08-2  (1001)
Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        gl  none   25°C  0.0  U T      K1=3.9         1959WOa (13878) 165
K1=3.8(40 C)
```

```
------------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 1.00M U        K1=2.87        1957WLa (13879) 166
                                         K(Li+HL)=0.88
Medium: Me4NCl
******************************************************************************
P4O13------           H6L    Tetraphosphate     (1102)
Tetraphosphate;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Li+        gl  R4N.X  25°C  1.0M U        K1=2.64        1967WMa (14049) 167
                                         K(Li+HL)=1.59
Medium: Me4NCl
******************************************************************************
P6O12------           H6L                     CAS 25268-83-1  (6590)
Dodecaoxohexaphosphate(III); anion of (PO.OH)6
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Li+        gl  R4N.X  25°C  1.0M U        K1=1.34        1960CEa (14061) 168
                                         K(Li+HL)=0.70
Medium: Me4NCl
******************************************************************************
SCN-                   HL    Thiocyanate      CAS 463-56-9  (106)
Thiocyanate;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  U        K1=0.93        1994GGa (15130) 169
Medium: DMF
------------------------------------------------------------------------------
Li+        sp  non-aq 20°C 100%  U  I     K1=3.87        1989GGa (15131) 170
                                         K1out=3.05
Medium: MeCN, by IR spectroscopy.  Also data for MeCN containing R4NX salts
------------------------------------------------------------------------------
Li+        cal NaClO4 25°C 0.50M U   H    K1=1.00   B2=1.07   1988ISb (15132) 171
                                         B4=3.12
Medium: LiClO4 + 10%w/w Triton X-100. DH(K1)=-11.0 kJ mol-1, DH(B2)=-31,
DH(B4)=-32.6. DS(K1)=-18 J K-1 mol-1, DS(B2)=-84, DS(B4)=-50.
------------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  U        K1=-0.125 B2=0.26   1979ITa (15133) 172
Medium: N,N-Dimethylacetamide. Method: Raman spectroscopy
------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=0.15        1971PGa (15134) 173
Medium: MeHNCHO
------------------------------------------------------------------------------
Li+        sp  non-aq 20°C 100%  U        K1=2.9         1970SSa (15135) 174
Medium: MeCN
******************************************************************************
SO4--                  H2L    Sulfate          CAS 7664-93-9  (15)
```

Sulfate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	NaCl	37°C	0.10M	C	I	K1=0.77	1982DRb (16304)	175
Data for I=0.03-0.50 M NaCl. At I=0.0 M, K1=1.12									
Li+	oth	oth/un	25°C	0.50M	U	TI	K1=0.77	1980GAb (16305)	176
Method: Ultrasonic absorption. Medium: Na2SO4									
Li+	con	none	25°C	0.0	U			1978FFa (16306)	177
							K(Li+LiSO4)=0.096		
Li+	oth	oth/un	25°C	.244M	U		K1=0.77	1975REa (16307)	178
Li+	oth	none	25?°C	0.0	M		K1=0.7	1966MBb (16308)	179
Li+	con	oth/un	18°C	0.0	U		K1=0.64	1930RDa (16309)	180

****

SeCN- HL Selenocyanate CAS 73102-11-2 (440)
Selenocyanate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	20°C	100%	U		K1=2.4	1970SSa (16991)	181
Medium: acetonitrile									

****

SiW11O39-------- H8L (2464)
alpha-Heterosilicon-polytungstate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	25°C	1.0M	U		K1=4.1	1982CCb (17237)	182

****

VO4--- H3L CAS 15457-75-7 (1586)
Vanadate; VO2(OH)3-- or polymers

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	NaClO4	25°C	1.00M	U			1975KIc (17381)	183
							K(Li+H7PV12O36)=1.92		
Li+	gl	R4N.X	20°C	0.10M	U			1963SGd (17382)	184
							K(Li+H15L10)=0.6		
							K(Li+H14L10)=1.6		
							K(Li+LiH14L10)=0.6		

****

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
-------------------------------------------------------------------------
Li+        con non-aq 30°C 100%  U        K1=7.06        1954JGa (17622) 185
Medium: ethanoic acid
*************************************************************************
CH3NO                   L    Formamide        CAS 75-12-7  (3536)
Methanoic acid amide; HCO.NH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        ISE non-aq 25°C 100%  C        K1=1.3    B2=2.0    1975NAa (17678) 186
Medium: CH3CN, 0.01 M Et4NClO4
*************************************************************************
CH4O                    L    Methyl alcohol   CAS 67-56-1  (597)
Methanol; CH3.OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        ISE non-aq 25°C 100%  C        K1=0.65   B2=0.83   1975NAa (17884) 187
Medium: CH3CN, 0.01 M Et4NClO4
*************************************************************************
CH5O4P                H2L                      CAS 2617-47-2  (1977)
Hydroxymethylphosphonic acid; HO.CH2.PO3H2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.10M U        K1=0.72        1972WFa (18149) 188
Medium: (CH3)4NCl
*************************************************************************
CH6O6P2               H4L    Medronic acid    CAS 1984-15-2  (2384)
Methanediphosphonic acid; CH2(PO3H2)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.50M U        K1=2.48        1967CIa (18285) 189
                                        K(Li+HL)=0.82
Medium: 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
-------------------------------------------------------------------------
Li+        gl  oth/un 37°C 0.15M C  I     K1=0.79        1983DRb (18946) 190
Medium: 0.15 M LiNO3. Method: determination of protonation constant in
LiNO3 and [Et4N]NO3 media. Data for I=0.0-1.0 M LiNO3. At I=0.0, K1=1.17.
*************************************************************************
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
-------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.25M C TI     K1=0.13        1985DRa (20031) 191
I=0.02-1 M Et4NI
-------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.16M U  I     K1=-0.13       1985RSa (20032) 192
K1=-0.10 (I=0.04); -0.13 (0.25); -0.09 (0.49); -0.02 (1.0)
-------------------------------------------------------------------------
Li+        con alc/w  25°C 100%  U  I     K1=1.73        1981ASa (20033) 193
K1=1.18 in water. In 50% dioxan/H2O: K1=1.65; 60%: 2.04; 70%: 2.50
-------------------------------------------------------------------------
Li+        gl  non-aq 25°C 100%  U   H    K1=6.87        1981TMb (20034) 194
Medium: Glacial acetic acid. Alternative method: Spectrophotometry.
DH(K1)=-29.0 kJ mol-1
-------------------------------------------------------------------------
Li+        con none   35°C  0.0  C  I     K1=1.295       1979ASc (20035) 195
Also data for MeOH (K1=1.834), 50% dioxan/H2O (K1=1.788) and
70% dioxane/H2O (K1=2.874).
-------------------------------------------------------------------------
Li+        gl  oth/un 25°C  0.0  U        K1=0.26        1964AMa (20036) 196
-------------------------------------------------------------------------
Li+        gl  non-aq 25°C 100%  U        K1=6.78        1964KLa (20037) 197
Medium: ethanoic acid
-------------------------------------------------------------------------
Li+        con oth/un 18°C 0.10M U  I     K1=-0.53       1964SUb (20038) 198
Medium: Li ethanoate. K1=-0.54(I=0.2), -0.52(I=0.5), -0.49(I=0.7)
-------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  U        K1=6.20        1961PSa (20039) 199
Medium: ethanoic acid
-------------------------------------------------------------------------
Li+        EMF non-aq 25°C 100%  U        K1=6.79        1956BKa (20040) 200
Method: chloranil electrode. Medium: ethanoic acid
-------------------------------------------------------------------------
Li+        con non-aq 30°C 100%  U        K1=6.82        1954JGa (20041) 201
Medium: ethanoic acid
*************************************************************************
C2H5NO                  L    Methylformamide  CAS 123-39-7  (6268)
N-Methylformamide; HCO.NH.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        ISE non-aq 25°C 100%  C        K1=1.4    B2=2.4    1975NAa (20675) 202
Medium: CH3CN, 0.01 M Et4NClO4
*************************************************************************
C2H5NO2                HL    Glycine          CAS 56-40-6  (85)
2-Aminoethanoic acid; H2N.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        sp  oth/un 25°C  1.0M U        K1=1.2         1987HAa (21603) 203
```

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	ISE	non-aq	25°C	100%	M		K1=1.69	B2=2.99	1988NHa (22105)	204
Medium: MeCN, 0.01 M Et4NClO4										
Li+	ISE	non-aq	25°C	100%	U T H		K1=1.70		1982NYa (22106)	205
Medium: MeCN										
Li+	ISE	non-aq	25°C	100%	C		K1=1.7	B2=3.0	1975NAa (22107)	206
							B3=3.5			
Medium: CH3CN, 0.01 M Et4NClO4										

****

C2H8N2 L Ethylenediamine CAS 107-15-7 (23)
1,2-Diaminoethane; H2N.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	sp	alc/w	25°C	95%	U		K1=0.87		1993GSa (23186)	207
Medium: 95% w/w EtOH/H2O, 0.05 M Et4NClO4, by competitive spectrophotometry										
Li+	gl	oth/un	25°C	0.10M	C	I	K1=-0.20		1990CDb (23187)	208
							K(Li+HL)=-0.65			
Medium: 0.10 M LiCl. Data for I=0.25-1.0 M.										

****

C2H8O6P2 H4L CAS 6145-33-1 (3543)
Ethane-1,1-diphosphonic acid; CH3.CH(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	gl	R4N.X	25°C	0.50M	U		K1=3.1		1967CIa (23270)	209
							K(Li+HL)=0.99			
Medium: Me4NCl										

****

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
Li+	gl	R4N.X	25°C	0.10M	U				1972WFa (23381)	210
							K(Li+HL)=1.36			
							B(2Li+L)=4.78			
Medium: (CH3)4NCl										
Li+	gl	R4N.X	25°C	0.50M	U		K1=3.35		1967CIa (23382)	211
							K(Li+HL)=1.08			
Medium: Me4NCl										

****

C3H4O4 H2L Malonic acid CAS 141-82-2 (79)
Propanedioic acid; CH2(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	gl	R4N.X	37°C	0.25M	C	TI	K1=0.95 B(LiHL)=5.63		1985DRa (24488)	212

I=0.02-1 M Et4NI

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	gl	oth/un	37°C	0.15M	C	I	K1=0.67	B2= 1.15	1983DRb (24489)	213

Medium: 0.15 M LiNO3. Method: determination of protonation constant in LiNO3 and [Et4N]NO3 media. Data for I=0.0-1.0 M LiNO3. At I=0.0, K1=1.05.

****

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
Li+	EMF	oth/un	25°C	->0		U	K1=0.20		1954DMb (25475)	214

Method: H electrode

****

C3H7NO L DMF CAS 68-12-2 (598)
N,N-Dimethylformamide; HCO.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	ISE	non-aq	25°C	100%		M	K1=1.14 B3=1.66 B4=1.75	B2= 2.20	1999NMa (25659)	215

Method: ISE based on benzo-12-crown-4 coupled to polyacrylamide.
Medium: acetonitrile, 0.01 M Et4NClO4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	ISE	non-aq	25°C	100%		M	K1=1.20	B2=3.04	1988NHa (25660)	216

Medium: MeCN, 0.01 M Et4NClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	ISE	non-aq	25°C	100%		U T H	K1=1.37		1982NYa (25661)	217

Medium: MeCN

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	ISE	non-aq	25°C	100%		C	K1=1.2 B3=1.8	B2=2.0	1975NAa (25662)	218

Medium: CH3CN, 0.01 M Et4NClO4

****

C3H10O6P2 H4L (3556)
Propane-2,2-diphosphonic acid; CH3.C(PO3H2)2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	gl	R4N.X	25°C	0.50M		U	K1=3.8 K(Li+HL)=1.38		1967CIa (28401)	219

Medium: Me4NCl
****
C4H4O4 H2L Maleic acid CAS 110-16-7 (111)
cis-Butenedioic acid; HOOC.CH:CH.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 37°C 0.25M C TI K1=0.91 1985DRa (29099) 220
B(LiHL)=5.9
I=0.02-1 M Et4NI

Li+ gl oth/un 37°C 0.15M C I K1=0.72 1983DRb (29100) 221
Medium: 0.15 M LiNO3. Method: determination of protonation constant in
LiNO3 and [Et4N]NO3 media. Data for I=0.0-1.0 M LiNO3. At I=0.0, K1=1.08.
****
C4H6O3 L CAS 108-32-7 (6267)
Propylene carbonate, 1,2-Propanediol cyclic carbonate, 4-Methyl-1,3-dioxolan-2-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ ISE non-aq 25°C 100% C K1=0.5 1975NAa (29752) 222
Medium: CH3CN, 0.01 M Et4NClO4
****
C4H6O4 H2L Succinic acid CAS 110-15-6 (112)
1,4-Butanedioic acid; HOOC.CH2.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 37°C 0.25M C TI K1=0.70 1985DRa (29991) 223
B(LiHL)=5.38
I=0.02-1 M Et4NI

Li+ gl oth/un 37°C 0.15M C I K1=0.42 B2= 0.60 1983DRb (29992) 224
Medium: 0.15 M LiNO3. Method: determination of protonation constant in
LiNO3 and [Et4N]NO3 media. Data for I=0.0-1.0 M LiNO3. At I=0.0, K1=0.84.
****
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
---
Li+ ISE oth/un 25°C 0.10M U K1=0.38 1964RZa (30669) 225

Li+ gl R4N.X ? 0.28M U K1=0.45 1963EDa (30670) 226
Medium: Me4NBr
****
C4H6O5 H2L Diglycolic acid CAS 110-99-6 (243)
Di(carboxy)methyl ether, 2,2'-Oxydiethanoic acid; HOOC.CH2.O.CH2.COOH

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

```
------------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.25M C TIH    K1=0.70        1985DRa (30892) 227
                                          B(LiHL)=3.91
0.02-1 M NEt4I. 12.5-48 C. DH(K1)=4 kJ mol-1, DS=35; DH(LiHL)=10, DS=119
------------------------------------------------------------------------------
Li+        oth oth/un 30°C 1.00M U        K1=-0.62       1973OEa (30893) 228
Method: Raman spectroscopy. medium: LiCl
******************************************************************************
C4H8O                   L    THF              CAS 109-99-9  (2537)
Tetrahydrofuran; cyclo(-CH2.CH2.O.CH2.CH2-)
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Li+        sp  diox/w 25°C 100%  U    M                   1990TPa (33188) 229
                                        K(Li(picrate)+L)=-0.02
With 2-methyltetrahydrofuran K=-0.47; 2,5-dimethyl- K=-0.09; tetrahydropyran
K=-0.54; dioxalane K=-0.47; hexamethyleneoxide -0.55
******************************************************************************
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
------------------------------------------------------------------------------
Li+        ISE non-aq 25°C 100%  U T H    K1=1.76        1982NYa (33762) 230
Medium: MeCN
------------------------------------------------------------------------------
Li+        ISE non-aq 25°C 100%  U        K1=1.39   B2=2.27   1976CWc (33763) 231
                                          B3=2.34
                                          B4=2.3
Medium: propylene carbonate
------------------------------------------------------------------------------
Li+        ISE non-aq 25°C 100%  C        K1=1.8    B2=2.9    1975NAa (33764) 232
                                          B3=3.3
Medium: CH3CN, 0.01 M Et4NClO4
******************************************************************************
C4H10O                 HL    t-Butanol        CAS 75-65-0  (1740)
tert-Butanol, (CH3)3C.OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=8.0         1974ESa (34659) 233
Medium: DMSO
******************************************************************************
C4H10O3                 L                        CAS 111-46-6  (3579)
2,2'-Oxydiethanol; (HO.CH2.CH2)2.O   (Diethylene glycol)
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C        K1=2.7         1992MSe (34702) 234
Medium: 100% MeOH. Anion: picrate. Also data for nitrophenolate anions.
```

****
C4H11N L (6678)
Dimethylethylamine; (CH3)2NCH2CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ kin non-aq 20°C 100% U M 1993BCd (34823) 235
K=0.740
Metal:Li(0). Medium:Tetrahydrofuran. K:0.5Li2A2B2+L=0.5Li2A2L2+B.
A:Di(iso-propyl)amine. B:N,N,N',N'-Tetramethylethylenediamine.
****
C4H11NO3 L Tris buffer CAS 77-86-1 (550)
2-Amino-2-(hydroxymethyl)-propan-1,3-diol; (HO.CH2)3C.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 1.00M C I K1=-0.23 1982SSf (35058) 236
In 90 % (v/v) DMSO/water mixture: K1=0.37
****
C5H5N L Pyridine CAS 110-86-1 (31)
Pyridine, Azine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ ISE non-aq 25°C 100% C K1=0.72 B2=0.43 1975NAa (36648) 237
Medium: CH3CN, 0.01 M Et4NClO4
****
C5H6N2 L 2-Aminopyridine CAS 504-29-0 (1478)
2-Aminoazine, 2-Pyridylamine; C5H4N.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w 25°C 95% U K1=0.76 1993GSa (37128) 238
Medium: 95% w/w EtOH/H2O, 0.05 M Et4NClO4, by competitive spectrophotometry
****
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
---
Li+ sp non-aq 25°C 100% U K1=4.76 1984AMa (38012) 239
In Dimethyl Sulfoxide (DMSO);
Data also for other di- and triketones and esters and their alkali enolates
---
Li+ gl diox/w 30°C 75% U K1=4.75 B2=8.72 1975MMa (38013) 240

Li+ gl alc/w 25°C 100% U K1=2.8 1965LIa (38014) 241
Medium: MeOH, 0.1 M LiClO4. In EtOH: K1=4.6
****
C6H3N3O7 HL Picric acid CAS 88-89-1 (593)

2,4,6-Trinitrophenol; HO.C6H2(NO2)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	non-aq	25°C	100%	C		K1=3.04	1999KKb	(42122) 242

Medium: MIBK. Method: distribution of metal picrates into MIBK containing HO(CH2.CH2.O)n.C12H25, n=4, 6 or 8.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	oth/un	25°C	dil	C		K(LiA+L)=2.53	1998TKa	(42123) 243

Self medium, I<0.03 M. Method: Extraction of LiAL into dichloromethane. A is 18-crown-6.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C	I	K1=8.07 B(Li2L)=10.03	1997CHb	(42124) 244

Medium: THF. By conductivity, species M2L and L2M are equivalent. Also data for dimethoxyethane and ethyl acetate.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C	I	K1=2.99	1996HHc	(42125) 245

Medium: acetonitrile. Also data for benzonitrile and DMF.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	25°C	100%	U		K1=3.97	1980GRa	(42126) 246

Medium: 2-butanol

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	alc/w	30°C	100%	U	I M	K1=2.72	1979PSa	(42127) 247

Medium: isoPrOH. K(LiL+diethyleneglycol)=2.51; K(LiL+trien-glycol)=2.41. In H2O: K1=1.11

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	none	25°C	0.00	U		K1=1.13	1972IWc	(42128) 248

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	oth/un	25°C	var	U		K1=2.2	1970SSb	(42129) 249

Method: paper chromatography

****

C6H4N2O5 HL CAS 50-28-5 (505)

2,4-Dinitrophenol; HO.C6H3(NO2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C	I	K1=4.29 B(Li2L)=6.71	1996HHc	(42232) 250

Medium: acetonitrile. By conductivity, species M2L and L2M are equivalent. Also data for benzonitrile and DMF.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=3.54	1973FGa	(42233) 251

Medium: tetrahydrofuran

****

C6H4N2O5 HL CAS 329-71-5 (507)

2,5-Dinitrophenol; HO.C6H3(NO2)2

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

---

Li+ con non-aq 25°C 100% C I K1=5.33 1996HHc (42244) 252
B(Li2L)=8.48
K(2LiL=Li2L2)=1.72

Medium: acetonitrile. By conductivity, species M2L and L2M are equivalent.
Also data for DMF.

****

C6H5NO3 HL 2-Nitrophenol CAS 88-75-5 (510)
2-Nitrohydroxybenzene; HO.C6H4.NO2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C		K1=6.51 B(Li2L)=10.60 K(2LiL=Li2L2)=3.01	1996HHc (42737)	253

Medium: acetonitrile. By conductivity, species M2L and L2M are equivalent.

****

C6H5NO3 HL 4-Nitrophenol CAS 100-02-7 (454)
4-Nitrohydroxybenzene; HO.C6H4.NO2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C		K1=4.96 B(Li2L)=8.30 K(2LiL=Li2L2)=3.18	1996HHc (42810)	254

Medium: acetonitrile. By conductivity, species M2L and L2M are equivalent.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=6.99	1991AMa (42811)	255

Medium: THF

****

C6H5OCl HL 4-Chlorophenol CAS 106-48-9 (1631)
4-Chlorophenol; HO.C6H4.Cl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=9.13	1991AMa (43054)	256

Medium: THF

****

C6H6O HL Phenol CAS 108-95-2 (457)
Hydroxybenzene, phenol; C6H5.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=10.16	1991AMa (43542)	257

Medium: THF

****

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

---

Li+ sp alc/w 25°C 95% U K1=1.31 1993GSa (43783) 258
Medium: 95% w/w EtOH/H2O, 0.05 M Et4NClO4, by competitive spectrophotometry

****

C6H8N2 L CAS 95-54-5 (2899)
1,2-Diaminobenzene, 1,2-Phenylenediamine; C6H4(NH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	alc/w	25°C	95%	U		K1=1.12	1993GSa (45271)	259

Medium: 95% w/w EtOH/H2O, 0.05 M Et4NClO4, by competitive spectrophotometry

****

C6H8O6 H3L Tricarballylic CAS 99-14-9 (1620)
1,2,3-Propanetricarboxylic acid; HOOC.CH2.CH(COOH).CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	oth/un	25°C	0.0	C	I	K1=1.473	1994DFc (45567)	260
							B(LiHL)=7.322		
							B(LiH2L)=11.504		
							B(Li2L)=2.083		
							B(Li2HL)=6.923		

Values at I=0 calculated from data for 0.04-1.0 M LiCl.

****

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
Li+	gl	oth/un	25°C	0.50M	U	H	K1=1.10	1990DRa (46158)	261
							B(LiHL)=6.49		
							B(Li2L)=1.66		

DH(K1)=-3.0, DH(LiHL)=-3.6 and DH(Li2L)=-5.0 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	KCl	37°C	0.15M	C		K1=0.88 B2=1.13	1981CDb (46159)	262

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	ISE	oth/un	25°C	0.10M	U		K1=0.83	1964RZa (46160)	263

****

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
Li+	gl	oth/un	25°C	0.10M	C	TIH	K1=2.56	1985DRb (46894)	264
							B(LiHL)=9.62		

Data at 10-45 C and I=0.02-1.0 M in LiNO3. DH(K1)=8 kJ mol-1; DS=(K1)=74.
DH(LiHL)=15; DS(LiHL)=232 (by T coeff.)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	R4N.X	25°C	0.10M	C		K1=2.35	1985HAd (46895)	265

```
Li+        gl  R4N.X  20°C 0.10M U      T K1=2.51        1963IFb (46896) 266
Medium: Me4HNO3
--------------------------------------------------------------------------
Li+        EMF oth/un 20°C  0.0  U        K1=3.28        1945SKb (46897) 267
Method: H electrode
**************************************************************************
C6H10O2                HL                    CAS 815-57-6  (2261)
3-Methyl-pent-2,4-dione; CH3.CO.CH(CH3).CO.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        nmr alc/w  -60°C 100%  U        K1=1.1         1979RHa (47948) 268
Medium: CD3OD
**************************************************************************
C6H14O3                 L    Diglyme          CAS 111-96-6  (6769)
bis-2-Methoxyethyl ether, 2,5,8-Trioxanonane; CH3.O.CH2CH2.O.CH2CH2.O.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C        K1=3.2         1992MSe (51051) 269
Medium: 100% MeOH. Anion: picrate. Also data for nitrophenolate anions.
**************************************************************************
C6H15NO3                    Triethanolamine  CAS 102-71-6  (447)
Tris-(2-hydroxyethyl)amine;                                          L
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 1.00M C  I     K1=-0.48        1982SSf (51297) 270
In 90 % (v/v) DMSO/water mixture: K1=0.49 (I=0.25 M)
--------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U    M   K1=4.70         1976FGb (51298) 271
                                         K(LiA+L)=2.34
A=Tetra-n-butylammonium-2,4-dinitrophenolate. Medium: Tetrahydrofuran
**************************************************************************
C6H15O15P3            H6L    Ins(1,2,6)P3     CAS 28841-62-5  (6479)
D-myo-Inositol 1,2,6-trisphosphoric acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.10M U        K1=2.38         1991BSa (51537) 272
                                         B(LiHL)=11.24
                                         B(LiH2L)=17.83
                                         B(Li2L)=3.60
**************************************************************************
C6H16N2                 L    Tetrameen        CAS 110-18-9  (124)
N,N,N',N'-Tetramethyl-1,2-diaminoethane; (CH3)2N.CH2.CH2.N(CH3)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        kin non-aq  0°C 100%  U    M                   1993BCd (51648) 273
```

K(Li2A2B2+2L=Li2B2L2+2A)=0.204
Metal:Li(0). Medium:Hexane. A:di(iso-propyl)amine. B:Tetrahydrofuran.
****
C6H16O3P2 L (2075)
Di(dimethylphosphinylmethyl) ether; Me2P(O)CH2.O.CH2.P(O)Me2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=4.04		1989KSa (51773)	274
Medium: tetrahydrofuran/CHCl3 4:1 (vol)

Li+	sp	non-aq	25°C	100%	U		K1=1.83		1983YSb (51774)	275
Medium: tetrahydrofurane + CHCl3 (4:1); Li as 2,4-dinitrophenolate.
In (CH3CN+CHCl3 1:1) K1=2.69. Data also for other phosphine oxides
---
Li+	con	non-aq	25°C	100%	U		K1=4.04		1982YSa (51775)	276
Medium: tetrahydrofuran+CHCl3 4:1(vol); M is 2,4-dinitrophenolate
****
C6H18N3OP L HMPA CAS 680-31-9 (603)
Hexamethylphosphoramide, Tris-(dimethylamino)phosphine oxide;((CH3)2N)3PO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	ISE	non-aq	25°C	100%	M		K1=3.32	B2=5.51	1988NHa (51981)	277
Medium: MeCN, 0.01 M Et4NClO4

Li+	con	non-aq	25°C	100%	U	M			1982GJb (51982)	278
Kout(LiL+A)=5.8
Medium: 1,2-dichloroethane. A=tetraphenylborate

Li+	ISE	non-aq	25°C	100%	U	T	H	K1=3.31		1982NYa (51983)	279
Medium: MeCN

Li+	ISE	non-aq	25°C	100%	C			K1=3.3	B2=5.5	1975NAa (51984)	280
Medium: CH3CN, 0.01 M Et4NClO4
****
C7H5NO HL CAS 767-00-0 (1632)
4-Cyanophenol; HO.C6H4.CN

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=8.04		1991AMa (52582)	281
Medium: THF
****
C7H6O4 H3L CAS 303-38-8 (1398)
2,3-Dihydroxybenzoic acid; C6H3(OH)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	gl	NaClO4	25°C	0	C	I	K1=1.67		1992CRa (54468)	282

K(Li+LiL)=0.77
K(Li+HL)=0.75
K(Li+H2L)=-0.7
Extrapolated to I=0 form I=0.04 to I=0.81
****
C7H8O2 HL CAS 150-76-5 (6738)
4-Methoxyphenol; CH3O.C6H4.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=11.07 1991AMa (56095) 283
Medium: THF. With 4-t-butylphenol K=10.87, 2-t-butylphenol K=10.13
****
C7H8O8P2 H4L (6892)
1,2-((Phenylenedioxo)methylene)diphosphonic acid); C6H4O2C(PO3H2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.50M U K1=2.42 1985GMb (56169) 284
Medium: 0.5 M Me4NCl
****
C8H5N5O6 H3L Murexide (453)
Purpuric acid (Murexide is ammonium salt);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% U TIH K1=5.34 1995KSa (58518) 285
Medium: 10% w/w DMF/MeCN. DH(K1)=-5.0 kJ mol-1, DS=86 J K-1 mol-1
Data also for 20 30, 40 w/w% DMF

Li+ sp alc/w 25°C 95% U K1=2.44 1993GSa (58519) 286
Medium: 95% w/w EtOH/H2O, 0.05 M Et4NClO4

Li+ sp non-aq 20°C 100% U K1=2.45 1992PSa (58520) 287
Medium: DMF, 0.01 M Me4NI
****
C8H5O2F3S HL TTA CAS 326-91-0 (165)
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% C M 2002IIa (58639) 288
K(LiL+phen)=6.74
Medium: chlorobenzene. For extraction from 0.10 M KCl:
K(Li+HL(o)=LiL(o)+H)=-10.34; K(Li+HL(o)+phen(o)=LiL(phen)(o)+H)=-3.60.

Li+ gl alc/w 25°C 0.10M U I K1=3.2 1965LIa (58640) 289
Medium: MeOH, 0.1 M LiClO4. In EtOH: K1=5.3
****
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
Li+	gl	R4N.X	37°C	0.25M	C	TI	K1=0.85 B(LiHL)=5.03	1985DRa (58985)	290

Medium: 0.02-1 M NEt4I

Li+	gl	oth/un	37°C	0.15M	C	I	K1=0.65 B2= 0.65	1983DRb (58986)	291

Medium: 0.15 M LiNO3. Method: determination of protonation constant in LiNO3 and [Et4N]NO3 media. Data for I=0.0-1.0 M LiNO3. At I=0.0, K1=1.00.

****

C8H8O3 HL Phenoxyacetic CAS 122-59-8 (1153)

Phenoxyethanoic acid; C6H5.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	none	25°C	0.0	C	TIH	K1=0.07	1985CDb (60038)	292

Calculated from protonation data for I=0.04-0.9 M LiCl. Data for 10-45 C. DH(K1)=7.7 kJ mol-1, DS(K1)=28 J K-1 mol-1.

****

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
Li+	cal	R4N.X	20°C	0.1M	C		DH1= -7.61 kJ/mol	1976ANb (60637)	293

in Me4NCl

Li+	gl	R4N.X	39°C	0.10M	U	TIH	K1=4.60	1963IFb (60638)	294

Medium: Me4NNO3. K1=4.90(20 C),4.70(27 C),4.57(34 C); DH(K1)=-29.3 kJ mol-1 DS=-4 J K-1 mol-1. At I=0 corr:K1=5.61(20 C)

Li+	ISE	oth/un	20°C	0.0	U	K1=5.40	1948SBa (60639)	295

****

C8H10O HL CAS 576-26-1 (1498)

2,6-Dimethylphenol; HO.C6H3(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	nmr	non-aq	22°C	100%	U	T H		1991JRa (60826)	296

Medium: dioxolane. 90-22 C. DH(Li2L+2LiClO4=2Li2LClO4)=0 kJ mol-1, DS=58 In THF: DH=0, DS=28. In dioxalane DH(LiL2+2LiBPh4=2Li2LBPh4)=-5, DS=-5

****

C8H11O2F3 HL CAS 22767-90-4 (1249)

1,1,1-Trifluoro-5,5-dimethyl-2,4-hexanedione; F3C.CO.CH2.CO.CH(CH3)3

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

Li+ oth diox/w 25°C 75% U K1=4.61 B2=8.05 1979MMa (61304) 297
****
C8H12O2 HL Dimedone CAS 126-81-8 (1137)
5,5-Dimethyl-1,3-cyclohexanedione;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 100% U I K1=1.5 1965LIa (61687) 298
Medium: MeOH, 0.1 M LiClO4. In EtOH: K1=2.1
****
C8H16O4 L 12-Crown-4 CAS 294-93-9 (174)
1,4,7,10-Tetraoxacyclododecane; cyclo(-O.(CH2.CH2.O)3.CH2.CH2-)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 25°C 100% C I K1=1.89 2001KZb (62683) 299
Method: 7Li nmr. Medium: acetonitrile.
Data for 20-80% w/w nitrobenzene/acetonitrile.

Li+ nmr non-aq 27°C 100% C K1=3.91 2000SMg (62684) 300
Medium: acetonitrile. Method: 7Li nmr.

Li+ cal non-aq 25°C 100% C IH K1=3.52 1996DNa (62685) 301
Medium: CH3CN. Data for LiX where X=AsF6-,BF4-,CF3SO3-,ClO4-. DH(K1)=
-21.35 kJ mol-1, DS=-4.6. In PC, K1=2.84, DH(K1)=-17.05, DS(K1)=-2.8.

Li+ nmr non-aq 27°C 1.0M C I K1=3.12 1996KAb (62686) 302
Method: 7Li nmr. Medium: acetonitrile. Also data for nitromethane and
20-80% w/w acetonitrile/nitromethane.

Li+ con alc/w 25°C 100% U I K1=1.320 1995DSb (62687) 303
Medium : MeOH. In MeCN K1=3.140

Li+ con non-aq 25°C 100% U K1=3.2 1993EVa (62688) 304
Medium: THF+CHCl3 (4:1 vol)

Li+ nmr non-aq 25°C 100% U K1=1.0 1989MGc (62689) 305
Medium: tetrahydrofurane

Li+ con alc/w 25°C 100% U H T B2=2.73 1987BUa (62690) 306
Medium: MeOH. DH(B2)=0 kJ mol-1; DS=52.0 J K-1 mol-1

Li+ con non-aq 25°C 100% C K1=<0.0 1987ZBb (62691) 307
Medium: MeOH.

Li+ con non-aq 25°C 100% U K1=3.40 1980HNa (62692) 308
Medium: MeCN

Li+ vlt non-aq 25°C 100% U K1=2.93 1980MDa (62693) 309
Medium: propylene carbonate

Li+ nmr non-aq 27°C 100% C IH K1=4.25 1980SPb (62694) 310
Method 7Li nmr. Medium: CH3CN. Also data for CH3NO2, PC, MeOH, acetone, PY DMSO, TMG, H2O.By calorimetry, DH(K1)=-16 kJ mol-1, DS(K1)=27 J K-1 mol-1.
****
C8H17NO3 L CAS 41775-76-2 (6751)
10-Aza-1,4,7-trioxacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ vlt non-aq 25°C 100% C K1=4.5 2000HHa (62764) 311
Medium: acetonitrile, 0.1 M Et4NClO4. Method: dc polarography.

Li+ cal non-aq 25°C 100% C IH K1=4.24 1994DTa (62765) 312
Medium: CH3CN. Data are for LiBF4. Data for LiAsF6 and Li(CF3SO3). DH(K1)= -19.91 kJ mol-1, DS=14.4. In propylene carbonate,K1=3.69, DH=-14.63, DS=22
****
C8H18N2O2 L CAS 294-92-8 (654)
1,7-Dioxo-4,10-diazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ vlt non-aq 25°C 100% C K1=5.3 2000HHa (62844) 313
Medium: acetonitrile, 0.1 M Et4NClO4. Method: dc polarography.

Li+ sol non-aq 20°C 100% C K1=4.03 1983SLa (62845) 314
Medium: CHCl3
****
C8H18O4 L Triglyme CAS 112-49-2 (2358)
1,2-Bis(methoxyethoxy)ethane; CH3O.C2H4O.CH2.CH2.OC2H4.OCH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=2.9 1993EVa (62988) 315
Medium: THF+CHCl3 (4:1 vol)

Li+ con non-aq 25°C 100% U M 1982GJb (62989) 316
Kout(LiL+A)=7.0
Medium: 1,2-dichloroethane. A=picrate
****
C8H18O5 L Tetra-Et-Glycol CAS 112-60-7 (5664)
2,2'-(Oxybis(2,2-ethanediyloxy))-bis-ethanol; O(CH2.CH2.O.CH2.CH2.OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% C K1=3.3 1992MSe (63004) 317
Medium: 100% MeOH. Anion: picrate. Also data for nitrophenolate anions.
****
C8H19NO5 L Bis-tris CAS 6976-37-0 (2827)
Bis-(2-hydroxyethyl)imino-tris(hydroxymethyl)methane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 1.00M C I K1=-0.28 1982SSf (63062) 318
In 90 % (v/v) DMSO/water mixture: K1=0.61 (I=0.25 M)
****
C8H20N4 L Cyclen CAS 294-90-6 (10)
1,4,7,10-Tetraazacyclododecane; cyclo(-(NH.CH2.CH2.)4-)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ EMF non-aq 25°C 100% U I K1=6.90 1996WPa (63294) 319
Medium: acetonitrile, 0.05 M NEt4ClO4. In propylene carbonate K1=5.6; in dimethylformamide K1=2.1
****
C8H20O4P2 L CAS 86536-56-3 (2076)
1,2-Bis(2-dimethylphosphinylmethoxy)ethane; Me2P(O)CH2.O.CH2.CH2.O.CH2.P(O)Me2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.38 1989KSa (63311) 320
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
****
C9H5NOBr2 HL CAS 521-74-4 (3279)
5,7-Dibromo-8-hydroxyquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w ? 100% U K1=5.54 1970PMc (63520) 321
****
C9H7NO HL Oxine CAS 148-24-3 (504)
8-Hydroxyquinoline (8-quinolinol);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 27°C 100% U I K1=1.96 B2= 2.36 1996MAb (64302) 322
Method: 7Li nmr. Medium: acetonitrile, 0.05 M LiClO4. Data for acetone (K1<0.5) and nitromethane (K1=1.87, K2=1.22).

Li+ sp alc/w 25°C 95% U K1=1.80 1993GSa (64303) 323
Medium: 95% w/w EtOH/H2O, 0.05 M Et4NClO4, by competitive spectrophotometry
---
Li+ sp non-aq 25°C 100% U I K1=2.82 B2=4.54 1992GSa (64304) 324
Medium: MeCN. In acetone:K1=1.98; in MeOH:K1=0.91. By fluorimetry
****
C9H11N3O7 H3L (3877)
N-(1-Methyl-2,4,6-trioxo-perhydropyrimidinyl)iminodiethanoic acid;

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

Li+ gl R4N.X 20°C 0.10M U K1=4.86 1963IFb (66526) 325
Medium: Me4NNO3
****
C9H11O2F5 HL CAS 2145-68-8 (1251)
1,1,1,2,2-Pentafluoro-6,6-dimethyl-3,5-heptanedione;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ oth diox/w 25°C 75% U K1=4.84 B2=8.23 1979MMa (66536) 326
****
C9H16O2 HL CAS 18362-64-6 (1134)
2,6-Dimethyl-3,5-heptanedione; (CH3)2.CH.CO.CH2.CO.CH(CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl diox/w 30°C 75% U K1=9.23 B2=15.76 1975MMa (67746) 327
****
C9H20O6Cl2P2 L CAS 19928-93-7 (2633)
Dichloromethylenedi(phosphonic acid diethyl ester); Cl2C(PO.(OC2H5)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 22°C 100% U K1=1.11 1981SKd (68123) 328
Medium: CH3CN
****
C9H22O6P2 L CAS 1660-94-2 (2632)
Methylenedi(phosphonic acid diethyl ester) CH2(PO.(OC2H5)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 22°C 100% U K1=1.62 1981SKd (68260) 329
Medium: CH3CN
****
C10H6N2O5 HL (9002)
2,4-Dinitronaphthol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% C K1=10.07 1997CHb (68444) 330
B(Li2L)=14.00
Medium: THF. By conductivity, species M2L and L2M are equivalent.
****
C10H6O8 H4L Pyromellitic Ac CAS 89-05-4 (519)
Benzene-1,2,4,5-tetracarboxylic acid; C6H2.(COOH)4

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 1.0M C K1=1.70 1991DDb (68520) 331
B(LiHL)=6.85
B(LiH2L)=10.76

B(LiH3L)=13.00
B(Li2L)=2.50
Medium: 1.0 M Et4NI. B(Li2HL)=6.87.

Li+ gl R4N.X 25°C 0.25M C I K1=1.44 1990DDb (68521) 332
B(LiHL)=6.33
B(LiH2L)=10.04
B(LiH3L)=12.12
B(Li2HL)=6.15
Medium: 0.25 M Et4NI. Data for 0.08-0.99 M. B(Li2L)=1.97
****
C10H8N2 L 2,2'-Bipyridyl CAS 366-18-7 (25)
2,2'-Bipyridine; (C5H4N)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 27°C 100% U I K1=2.11 B2= 2.97 1996MAb (69596) 333
Method: 7Li nmr. Medium: acetonitrile, 0.05 M LiClO4. Data for acetone (K1<0.5) and nitromethane (K1=2.44, K2=2.29).

Li+ sp alc/w 25°C 95% U K1=1.61 1993GSa (69597) 334
Medium: 95% w/w EtOH/H2O, 0.05 M Et4NClO4, by competitive spectrophotometry
---
Li+ sp non-aq 25°C 100% U I K1=1.87 1992GSa (69598) 335
Medium: MeCN. In acetone:K1=1.85; in MeOH:K1=0.45. By fluorimetry
****
C10H10O2 HL Benzoylacetone CAS 93-91-4 (197)
1-Phenylbutane-1,3-dione; C6H5.CO.CH2.CO.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=0.54 1988YSb (70745) 336
Medium: acetonitrile

Li+ gl alc/w 25°C 100% U I K1=3.1 1965LIa (70746) 337
Medium: MeOH, 0.1 MLiClO4. In EtOH: K1=3.2
****
C10H11NO5 H3L CAS 100844-86-8 (2108)
N-(2-Hydroxyphenyl)iminodiethanoic acid; HO.C6H4.N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl KNO3 20°C 0.10M U K1=2.20 1963IFb (71042) 338
****
C10H11NO7S H3L (3335)
N-(2-Sulfophenyl)iminodiethanoic acid; HO3S.C6H4.N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ EMF KCl 20°C 0.10M C K1=2.26 1947SWa (71067) 339

****

C10H11O2F7 HL CAS 17587-22-3 (1252)
1,1,1,2,2,3,3-Heptafluoro-7,7-dimethyl-4,6-octanedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	oth	diox/w	25°C	75%	U		K1=4.75 B2=8.32	1979MMa (71111)	340

****

C10H12N2O4 H2L CAS 16598-05-3 (967)
2-Pyridylmethyliminodiethanoic acid; C5H4N.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	KNO3	20°C	0.10M	U		K1=1.71	1963IFc (71264)	341

****

C10H13N3O7 H3L (3912)
1,3-Dimethyluramil-N,N-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	20°C	0.10M	U		K1=4.91	1963IFb (71806)	342

Medium: Me4NNO3

****

C10H13N5O4 L Adenosine CAS 58-61-7 (2154)
Adenosine, Adenine-9-beta-D-ribofuranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	nmr	non-aq	25°C	100%	U	M	K(LiCl+L)=0.8	1976PSc (71945)	343

Medium: DMSO

****

C10H14N5O7P H2L AMP-5 CAS 18422-05-4 (842)
Adenosine-5'-monophosphoric acid, 5-Adenylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	25°C	0.10M	C	T	K1=1.22	1991SMa (72459)	344

IUPAC evaluation

****

C10H14O HL CAS 98-54-4 (458)
4-(t-Butyl)-1-hydroxybenzene; C4H9.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=10.87	1991AMa (72610)	345

Medium: THF. With 2-t-butylphenol K=10.13

****

C10H15N5O10P2 H3L ADP CAS 20398-34-9 (2181)
Adenosine-5'-diphosphoric acid;

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.10M C      T K1=1.32        1991SMa (72988) 346
IUPAC evaluation
********************************************************************************
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
--------------------------------------------------------------------------------
Li+        gl  oth/un 25°C 0.10M C TIH    K1=2.90        1985DRb (73927) 347
                                          B(LiHL)=10.85
                                          B(Li2L)=3.05
Data at 10-45 C and I=0.02-1.0 M in LiNO3. DH(K1)=2 kJ mol-1; DS=60.
DH(LiHL)=-2; DS=198; DH(Li2L)=3; DS=65.
--------------------------------------------------------------------------------
Li+        cal R4N.X  20°C  1.0M C        K1=2.66        1976ANb (73928) 348
                                          DH1= 3.26 kJ/mol
in Me4NCl; for 0.1 M Me4NClK1=2.97; DH1=0.84 kJ/mol;
--------------------------------------------------------------------------------
Li+        sp  R4N.X  25°C 0.50M U        K1=2.43        1973CSa (73929) 349
Medium: (CH3)4NCl
--------------------------------------------------------------------------------
Li+        vlt R4N.X  20°C 0.10M U        K1=3.15        1972BZc (73930) 350
Medium: (CH3)4NOH
--------------------------------------------------------------------------------
Li+        gl  oth/un 25°C 0.32M U        K1=2.85   B2=3.68   1965BCa (73931) 351
                                          K(Li+HL)=0.86
Medium: CsCl
--------------------------------------------------------------------------------
Li+        cal oth/un 25°C 0.05M U   H                   1954CHa (73932) 352
Medium: LiCl. DH(K1)=-0.42 kJ mol-1, DS=54.3 J K-1 mol-1
--------------------------------------------------------------------------------
Li+        EMF KCl    20°C 0.10M U      T K1=2.79        1947SAa (73933) 353
Method: H electrode
********************************************************************************
C10H16N5O13P3         H4L    ATP              CAS 56-65-5  (403)
Adenosine-5'-triphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.10M C  IH  R K1=1.78        1991SMa (74755) 354
IUPAC evaluation. DH(K1)=-4 kJ mol-1 (tentatitive)
--------------------------------------------------------------------------------
Li+        gl  oth/un 25°C 0.25M U   H                   1986RSa (74756) 355
                                          K(Li+LiHL)=1.35
                                          B(LiHL)=6.79
--------------------------------------------------------------------------------
Li+        gl  oth/un 25°C 0.32M U        K1=1.7    B2=2.23   1965BCa (74757) 356
```

K(Li+HL)=0.8

Medium: CsCl

****

C10H17NO4 H2L CAS 2848-06-8 (3916)
N-(Cyclohexyl)iminodiethanoic acid; C6H11.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	KNO3	20°C	0.10M	U		K1=1.74	1963IFb (74975)	357

****

C10H17NO5 H2L CAS 6243-06-7 (3326)
N-(2-Hydroxycyclohexyl)iminodiethanoic acid; HO.C6H10.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	KNO3	20°C	0.10M	U		K1=2.19	1963IFb (74989)	358

****

C10H17NO5 H2L (3917)
N-(Tetrahydropyran-2-ylmethyl)iminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	KNO3	20°C	0.10M	U		K1=1.7	1963IFa (75002)	359

****

C10H17N5O16P4 H5L AQP CAS 1062-98-2 (3341)
Adenosine-5'-tetraphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	25°C	0.10M	C	T	K1=2.22	1991SMa (75159)	360

IUPAC evaluation

****

C10H18N2O5 H2L (5608)
1-Oxa-4,7-diazacyclononane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	KNO3	25°C	0.10M	U		K1=1.42	1990CCa (75235)	361

****

C10H20O5 L 15-Crown-5 CAS 33100-27-5 (576)
1,4,7,10,13-Pentaoxacyclopentadecane; cyclo(-(O.CH2.CH2)5-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	ISE	alc/w	25°C	100%	C	I T	K1=1.24	2003ADa (76036)	362

IUPAC Tentative. Medium: 0-0.1 M various.

Li+	nmr	non-aq	25°C	100%	C	I	K1=3.58	2001KZb (76037)	363

Method: 7Li nmr. Medium: acetonitrile.
Data for 20-80% w/w nitrobenzene/acetonitrile.

Li+ nmr non-aq 27°C 100% C K1=4.76 2000SMg (76038) 364
Medium: acetonitrile. Method: 7Li nmr.

Li+ vlt non-aq 25°C 100% C I K1=4.2 1999WKb (76039) 365
Medium: acetonitrile, 0.10 M Et4NClO4. Also data for TMS, propylene carbonate, acetone, formamide, DMF, DMA, DMSO, MeOH, EtOH.

Li+ nmr non-aq 27°C 1.0M C I K1=4.8 1996KAb (76040) 366
Method: 7Li nmr. Medium: acetonitrile. Also data for nitromethane and 20-80% w/w acetonitrile/nitromethane.

Li+ con alc/w 25°C 100% U I K1=1.314 1995DSb (76041) 367
Medium : MeOH. In MeCN K1=3.580

Li+ vlt non-aq 25°C 100% C K1=7.2 1995KTb (76042) 368
Method: ion transfer polarography. Medium: nitrobenzene, 0.05 M tetrabutylammonium tetraphenylborate.

Li+ cal non-aq 25°C 100% M H K1=3.42 1994BCd (76043) 369
Medium: acetone. DH(K1)=-12.9 kJ mol-1, TDS=6.5

Li+ cal non-aq 25°C 100% C IH K1=4.44 1994DTa (76044) 370
Medium: CH3CN. Data are for LiBF4. Data for LiAsF6 and Li(CF3SO3). DH(K1)= -25.34 kJ mol-1, DS=0.0. In propylene carbonate, K1=4.21, DH=-20.44, DS=12

Li+ con non-aq 25°C 100% C T K1=5.3 1988TKa (76045) 371
Medium: MeCN

Li+ con non-aq 25°C 100% C I K1=1.21 1987ZBb (76046) 372
Medium: MeOH. In 70% w/w MeOH/H2O, K1=1.02.

Li+ con non-aq 25°C 100% U K1=3.60 1980HNa (76047) 373
Medium: MeCN

Li+ nmr non-aq 27°C 100% C IH K1=>4 1980SPb (76048) 374
Method 7Li nmr. Medium: CH3CN. Also data for CH3NO2, PC, MeOH, acetone, PY DMSO, TMG, H2O.By calorimetry, DH(K1)=-21 kJ mol-1, DS(K1)=>6 J K-1 mol-1.

Li+ dis non-aq 25°C 100% U K1=4.2 1980TYa (76049) 375
Medium: propylene carbonate
****
C10H21NO4 L CAS 66943-05-3 (5818)
1-Aza-4,7,10,13-tetraoxacyclopentadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ vlt non-aq 25°C 100% C K1=5.2 2000HHa (76185) 376
Medium: acetonitrile, 0.1 M Et4NClO4. Method: dc polarography.
****

C10H22N2O3 L Cryptand 2,1 CAS 31249-95-3 (835)
4,7,13-Trioxa-1,10-diazacyclopentadecane (Trioxa(2,1)cryptand);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ vlt non-aq 25°C 100% C K1=5.4 2000HHa (76323) 377
Medium: acetonitrile, 0.1 M Et4NClO4. Method: dc polarography.

Li+ cal non-aq 25°C 100% M H K1=3.13 1994BCd (76324) 378
Medium: acetone. DH(K1)=-9.1 kJ mol-1, TDS=8.7

Li+ sp non-aq 20°C 100% U K1=2.3 1992PSa (76325) 379
Medium: DMF, 0.01 M Me4NI
****
C10H22O5 L Tetraglyme CAS 143-24-8 (121)
2,5,8,11,14-Pentaoxapentadecane; (CH3.O.CH2.CH2.O.CH2.CH2.)2O

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% C K1=4.69 1998KSc (76456) 380
Medium: 1,2-dichloroethane.

Li+ con non-aq 25°C 100% U K1=3.2 1993EVa (76457) 381
Medium: THF+CHCl3 4:1(vol)

Li+ con non-aq 25°C 100% U M 1982GJb (76458) 382
Kout(LiL+A)=5.7
Medium: 1,2-dichloroethane. A=tetraphenylborate
****
C11H11NO6 H3L CAS 1147-65-5 (425)
N-(2'-Carboxyphenyl)iminodiethanoic acid; HOOC.C6H4.N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 20°C 0.10M U K1=2.05 1963IFb (77829) 383
Medium: Me4NNO3

Li+ EMF KCl 20°C 0.10M U K1=2.18 1950WIa (77830) 384
Method: H electrode
****
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
---
Li+ oth R4N.X 25°C 0.50M U K1=4.01 1971CSb (79306) 385
Method: polarimetry. Medium: Me4NOH
****
C11H20O2 HL Dipivaloylmeth. CAS 1118-71-4 (363)
2,2,6,6-Tetramethyl-3,5-heptanedione; (CH3)3C.CO.CH2.CO.C(CH3)3

```
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        gl  diox/w 30°C  75%  U        K1=5.76   B2=10.37  1975MMa (79750) 386
*******************************************************************************
C11H22O5                L    16-Crown-5       CAS 55477-28-8  (1592)
1,4,7,10,13-Pentaoxacyclohexadecane; cyclo(-(O.CH2.CH2)5.CH2.CH2-)
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        con none   25°C  0.0  C        K1=1.05        2001KMb (79859) 387
-------------------------------------------------------------------------------
Li+        dis none   25°C  0.0  C    M                  1989TKc (79860) 388
Method: extraction of metal picrate/L from H2O into benzene.
K(Li+HA(org)+L(org)=LiAL(org)+H)=-1.74. HA is picric acid.
-------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C  I     K1=4.5         1988TKa (79861) 389
Medium: MeCN.  In propylene carbonate K1=3.3
*******************************************************************************
C12H5N7O12              L    Dipicrylamine    CAS 131-73-7  (1942)
Di(2,4,6-trinitrophenyl)amine; HN(C6H2(NO2)3)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        dis non-aq 25°C 100%  C        K1=3.9         1998KSc (80078) 390
Medium: 1,2-dichloroethane.
-------------------------------------------------------------------------------
Li+        dis oth/un 25°C  var  U        K1=1.7         1970SSb (80079) 391
Method: paper chromatography
*******************************************************************************
C12H6O12             H6L    Mellitic acid      (7400)
Benzenehexacarboxylic acid; (C(COOH))6
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        ISE R4N.X  25°C    0  C  I     K1=2.95        1996RSb (80113) 392
                                        B(NaHL)=10.13
                                        B(NaH2L)=15.57
                                        B(NaH3L)=20.06
                                        B(NaH4L)=22.80
B(Li2L)=4.80, B(Li2HL)=11.33 B(Li2H2L)=17.13, BLi2H3L)=20.84
B(LI3L)=6.43,B(Li3HL)=12.95, B(Li4L)=7.83. I=0-3 M Et4NI etc.
*******************************************************************************
C12H8N2                 L    Phenanthroline   CAS 66-71-7  (144)
1,10-Phenanthroline;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        nmr non-aq 27°C 100%  U  I     K1=2.28   B2= 3.98  1996MAb (80474) 393
Method: 7Li nmr.  Medium: acetonitrile, 0.05 M LiClO4.
```

Also data for acetone: K1=2.20, K2=1.93.

Li+ sp alc/w 25°C 95% U K1=2.24 1993GSa (80475) 394
Medium: 95% w/w EtOH/H2O, 0.05 M Et4NClO4, by competitive spectrophotometry

---

Li+ sp non-aq 25°C 100% U I K1=3.01 B2=4.88 1992GSa (80476) 395
Medium: MeCN. In acetone:K1=3.11, K2=2.00; in MeOH:K1=0.95. By fluorimetry

****

C12H16O4 L CAS 25887-95-6 (686)
2,3-Benzo-1,4,7,10-tetraoxacyclododeca-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	sp	non-aq	25°C	100%	U		K1=1.16		2000EGa (81675)	396

Method: fluorescence emission spectroscopy. Medium: acetonitrile.

Li+ cal non-aq 25°C 100% U H K1=1.05 1989SSd (81676) 397
Medium: CH3CN

Li+ cal non-aq 25°C 100% U H K1=1.05 B2=2.80 1988SSc (81677) 398
Medium: MeCN

Li+ cal alc/w 25°C 100% U H K1=1.34 1985LWa (81678) 399

****

C12H20N2O8 H4L BDTA CAS 868-43-9 (1742)
DL-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	oth	R4N.X	25°C	0.50M	U		K1=5.26(D) K1=2.60(meso) K(Li+HL)=1.68	1973CSa (82313)	400

Method: polarimetry. Medium: Me4NCl

****

C12H20O4P2 L CAS 82154-47-0 (2915)
1,2-Di((2-dimethylphosphinyl)methoxy)benzene; C6H4(OCH2PO(CH3)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=4.31	1982YSa (82642)	401

Medium: tetrahydrofuran+CHCl3 4:1(vol); M is 2,4-dinitrophenolate

****

C12H22O2 HL CAS 93269-15-9 (1250)
2,2,4,6,6-Pentamethyl-3,5-heptanedione; (CH3)3C.CO.CH(CH3).CO.C(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	oth	diox/w	25°C	75%	U		K1=6.85	B2=10.54	1979MMa (82859)	402

```
**************************************************************************
C12H23NO5               L                        (6793)
10-Methoxycarbonylethyl-1,4,7-trioxa-10-azacyclododecane;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        cal alc/w  25°C 100%  U   H    K1=2.71        1990KMb (82946) 403
Medium: MeOH.  DH=-3.0 kJ mol-1
**************************************************************************
C12H24N2O3              L    Cryptand 1,1,1   CAS 37095-49-1  (6636)
4,10,15-Trioxa-1,7-diazabicyclo[5.5.5]heptadecane;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        sp  non-aq 20°C 100%  U        K1=1.7         1992PSa (83018) 404
Medium: DMF, 0.01 M Me4NI
**************************************************************************
C12H24O2               HL    Lauric acid      CAS 143-07-7  (2540)
Dodecanoic acid, CH3.(CH2)10.COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        gl  oth/un 26°C 0.00  U        K1=4.12        1976HYa (83113) 405
                                         B(LiHL2)=9.06
**************************************************************************
C12H24O4                L                        CAS 26996-94-3  (2541)
Tetramethyl-12-crown-4
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=3.46        1980HNa (83124) 406
Medium: MeCN
**************************************************************************
C12H24O6                L    18-Crown-6       CAS 17455-13-9  (577)
1,4,7,10,13,16-Hexaoxacyclooctadecane;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        nmr non-aq 27°C 100%  C  I     K1=4.96        2001KZa (83454) 407
Method: 7Li nmr. Medium: nitromethane. In acetonitrile, K1=2.25
--------------------------------------------------------------------------
Li+        nmr non-aq 25°C 100%  C  I     K1=1.92        2001KZb (83455) 408
Method: 7Li nmr. Medium: acetonitrile.
Data for 20-80% w/w nitrobenzene/acetonitrile.
--------------------------------------------------------------------------
Li+        dis non-aq 25°C 100%  U        K1=8.20        2000KSa (83456) 409
Medium: 1,2-dichloroethane
--------------------------------------------------------------------------
Li+        nmr non-aq 27°C 100%  U  I     K1=2.52        2000SMd (83457) 410
Method: 7Li nmr. Medium: acetonitrile (AN). Also data for 50% w/w AN/
```

nitrobenzene (K1=2.80) and 50% w/w AN/nitromethane (K1=2.98).

Li+ cal non-aq 25°C 100% C H K1=2.50 1999WBa (83458) 411
Medium: N,N-dimethylformamide. DH(K1)=-0.7 kJ mol-1.

Li+ dis non-aq 25°C 100% C I 1998TKa (83459) 412
K(Li+A+L(org)=LiAL(org))=2.440
Method: Extraction from aqueous phase (I<0.03, pH 10.6-11.8) into dichloromethane. Data for many non-aqueous phases. HA is picric acid.

Li+ cal non-aq 25°C 100% C K1=4.74 1997DZa (83460) 413
Medium: benzonitrile. DH(K1)=-38.48 kJ mol-1, DS(K1)=-38.3 J K-1 mol-1.

Li+ nmr non-aq 27°C 1.0M C I K1=2.30 1996KAb (83461) 414
Method: 7Li nmr. Medium: acetonitrile. Also data for nitromethane and 20-80% w/w acetonitrile/nitromethane.

Li+ vlt non-aq 25°C 100% C K1=7.5 1995KTb (83462) 415
Method: ion transfer polarography. Medium: nitrobenzene, 0.05 M tetrabutylammonium tetraphenylborate.

Li+ cal non-aq 25°C 100% M H K1=2.41 1994BCd (83463) 416
Medium: acetone. DH(K1)=-19.8 kJ mol-1, TDS=-6.1

Li+ dis non-aq 25°C 100% U 1993INa (83464) 417
B(Li2P2L)=7.43
K is the equilibrium constant for extraction of the metal picrate (P) into CH2Cl2. For extraction from D2O, B=7.53

Li+ con non-aq 25°C 100% C K1=2.782 1990SAb (83465) 418
Medium: propylene carbonate.

Li+ con non-aq 25°C 100% U K1=3.73 1980HNa (83466) 419
Medium: MeCN

Li+ nmr non-aq 27°C 100% C IH K1=2.34 1980SPb (83467) 420
Method 7Li nmr. Medium: CH3CN. Also data for CH3NO2, PC, MeOH, acetone, PY DMSO, TMG, H2O.By calorimetry, DH(K1)=ca.0 kJ mol-1,DS(K1)=45 J K-1 mol-1.
****
C12H25NO5 L CAS 33941-15-0 (4939)
1,4,7,10,13-Pentaoxa-16-azacyclooctadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ vlt non-aq 25°C 100% C K1=3.2 2000HHa (83707) 421
Medium: acetonitrile, 0.1 M Et4NClO4. Method: dc polarography.
****
C12H26NO2P L (7849)
N,N-Diethylcarbamoylmethyl-(dipropylphosphineoxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C		C		K1=4.0	1999ESa (83720)	422

In tetrahydrofuran; alkali metal is used as 2,4-dinitrophenolate

****

C12H26N2O4 L Cryptand 2,2 CAS 23978-55-4 (925)
4,7,13,16-Tetraoxa-1,10-diazacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	alc/w	25°C	100%	C		K1=3.50	2002NFa (83860)	423

Medium: 100% MeOH. Method: electrospray ionization mass spectrometry.

Li+	cal	non-aq	25°C	100%	M	H	K1=1.52	1994BCd (83861)	424

Medium: acetone. DH(K1) < 0 kJ mol-1

Li+	sp	non-aq	20°C	100%	U		K1=1.2	1992PSa (83862)	425

Medium: DMF, 0.01 M Me4NI

Li+	ISE	non-aq	25°C	100%	U	I	K1=6.98	1983CFa (83863)	426

Medium: MeNO2

Li+	sol	non-aq	20°C	100%	C		K1=4.08	1983SLa (83864)	427

Medium: CHCl3

****

C12H26O6 L Pentaglyme CAS 1191-87-3 (2498)
2,5,8,11,14,17-Hexaoxaoctadecane; (CH3.O.CH2.CH2.O.CH2.CH2.O.CH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=3.2	1993EVa (84007)	428

Medium: THF+CHCl3 (4:1 vol). Also data for other solvents

****

C12H27N3O3 L THETAC (7199)
1,4,7-Tris(hydroxyethyl)-1,4,7-triazacyclononane

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	EMF	non-aq	25°C	100%	C		K1=3.13	1997WWa (84088)	429

Medium: MeOH, 0.05M Et4NClO4.
Method: Ag/Ag+ electrode; by competition with Ag+.

****

C12H32N4O12P4 H8L DOTPH CAS 91987-74-5 (229)
1,4,7,10-Tetraazacyclododecane-N,N',N",N"'-tetramethylenephosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	nmr	none	25°C	0	U	M	B(LiTmDOTP)=1.58 B(Li2TmDOTP)=3.03	1996RSa (84414)	430

B(Li3TmDOTP)=4.31
B(LiTmDOTPH)=9.16
B(LiTmDOTPH2)=16.0, B(Li2TmDOTPH)=10.57, B(Li3TmDOTPH)=11.79
mixed-metal complexes in the Li(I)-Tm(III)-DOTP terner system

****

C13H10O6 HL CAS 156426-82-3 (8800)
3-Acetoacetyl-7-methyl-2H,5H-pyrano(4,3-b)pyran-2,5-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	20°C	100%	C			1998FLb (85005)	431
							K(Li+HL=LiL+H)=-3.01		

Method: absorption and fluoroscence spectroscopy. Medium: acetonitrile.

****

C13H18O4 L Bz-13-crown-4 CAS 62150-58-7 (552)
2,3,6,7,9,10-Hexahydro-5H-1,4,8,11-Benzotetraoxacyclotridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	cal	alc/w	25°C	100%	U	H	K1=1.26	1985LWa (86047)	432
Li+	sol	non-aq	25°C	100%	U	I	K1=3? K2=1.26	1981OJa (86048)	433

Medium: CH2Cl2: K1=5(?), K2=1.70. In CH3CN: K1=2.40

****

C13H26O5 L (6410)
15,15-Dimethyl-1,4,7,10,13-pentaoxacyclohexadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	none	25°C	0.0	C		K1=1.15	2001KMb (86477)	434
Li+	con	non-aq	25°C	100%	C	I	K1=4.1	1992TFa (86478)	435

Medium: acetonitrile. In propylene carbonate, K1=3.13.

****

C13H26O6 L 19-Crown-6 CAS 55471-27-7 (8943)
1,4,7,10,13,16-Hexaoxacyclononadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C	I	K1=3.73	2000TMb (86498)	436

Medium: CH3CN. In other media, K1=2.29 (propylene carbonate), 1.72 (DMSO).

Li+	con	oth/un	25°C	dil	C		K1=0.79	1999TMa (86499)	437

Self medium (LiCl). For LiNO3, K1=0.72; for LiClO4, K1=0.77.

****

C14H8O2 L Anthraquinone CAS 84-65-1 (2781)
Anthraquinone;

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

```
Li+        vlt R4N.X  25°C 0.20M U        K1=1.06        1975PTc (86623) 438
**************************************************************************
C14H8O3                HL                    CAS 129-43-1  (2778)
1-Hydroxyanthraquinone;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        vlt R4N.X  25°C 0.20M U        K1=2.94   B2=5.49   1975PTc (86629) 439
**************************************************************************
C14H16N2O8            H4L                    CAS 40774-59-2  (1901)
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.10M C   H    K1=2.02        1990NNa (87956) 440
                                         K(LiL+H)=5.63
Medium: Et4NClO4. DH(K1)=10.4 kJ mol-1. DS(K1)=73 J mol-1 K-1.
--------------------------------------------------------------------------
Li+        gl  R4N.X  25°C 0.10M U        K1=2.39        1985MHb (87957) 441
                                         K(LiL+H)=6.34
                                         K(Li+HL)=1.81
                                         K(LiHL+H)=4.44
Medium: 0.10 M Me4NCl.
**************************************************************************
C14H20O5                L    Benzo15-crown-5  CAS 14098-44-3  (608)
2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Li+        dis none   25°C  dil  C  I M                   2002THb (88294) 442
                                         K(LiL+A)=-0.32
                                         K(Li+A+L(org)=LiAL(org))=1.720
HA is picric acid. Data for several aryl and alkyl solvents.
Method: extraction of metal picrate into dichloromethane/L.
--------------------------------------------------------------------------
Li+        con none   25°C  0.0  C        K1=0.76        2002TTa (88295) 443
--------------------------------------------------------------------------
Li+        nmr non-aq 25°C 100%  C  I     K1=3.22        2001KZb (88296) 444
Method: 7Li nmr. Medium: acetonitrile.
Data for 20-80% w/w nitrobenzene/acetonitrile.
--------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  C        K1=5.60        2000ICa (88297) 445
Medium: nitromethane.
--------------------------------------------------------------------------
Li+        nmr non-aq 27°C 100%  C        K1=4.56        2000SMg (88298) 446
Medium: acetonitrile. Method: 7Li nmr.
--------------------------------------------------------------------------
Li+        vlt non-aq 25°C 100%  C  I     K1=3.8         1999WKb (88299) 447
Medium: acetonitrile, 0.10 M Et4NClO4. Also data for TMS, propylene
carbonate, acetone, formamide, DMF, DMA, DMSO, MeOH, EtOH.
```

Li+ nmr non-aq 27°C 1.0M C I K1=4.51 1996KAb (88300) 448
Method: 7Li nmr. Medium: acetonitrile. Also data for nitromethane and
20-80% w/w acetonitrile/nitromethane.

Li+ cal non-aq 25°C 100% U H K1=3.20 1989SSd (88301) 449
Medium: CH3CN

Li+ con non-aq 25°C 100% C I K1=4.46 1988TKb (88302) 450
Medium: MeCN. In propylene carbonate K1=3.77; in MeOH 2.31

Li+ sp non-aq 22°C 100% U K1=6.09 1987CCc (88303) 451
In deuterochloroform

Li+ con non-aq 25°C 100% U K1=3.77 1982TAa (88304) 452
Medium: propylene carbonate
****
C14H22N2O8 H4L CDTA CAS 482-54-2 (200)
trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ oth R4N.X 25°C 0.50M U K1=6.11 1971CSa (88710) 453
K(Li+HL)=1.15
Method: polarimetry. Medium: Me4NOH

Li+ vlt KNO3 30°C 0.10M U K1=4.13 1967SSe (88711) 454
****
C14H23N3O10 H5L DTPA CAS 67-43-6 (238)
Diethylenetriamine-pentaethanoic acid; HOOC.CH2.N(CH2.CH2.N(CH2.COOH)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl KNO3 25°C 0.10M C K1=3.1 1960WAa (89308) 455
****
C14H24N2O10 EGTA CAS 67-42-5 (349)
Ethyleneglycol-O,O'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ kin KCl 25°C 1.50M U K1=1.17 1968TFb (89891) 456
****
C14H26N2O7 H2L (1567)
1,4,10-Trioxa-7,13-diazacyclopentadecane-N,N'-diethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.10M C K1=2.139 1987DDb (90195) 457
****
C14H26O5 L CAS 17454-48-7 (5039)

Cyclohexyl-15-crown-5, 2,3-Cyclohexyl-1,4,7,10,13-pentaoxacyclopentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	ISE	oth/un	25°C	dil	A		K1=<1	1971FRa (90272)	458

****

C14H28N2O4 L Cryptand 2,1,1 CAS 31250-06-3 (836)
1,10-Diaza-4,7,13,18-tetraoxabicyclo[8,5,5]eicosane (2,1,1);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	ISE	non-aq	25°C	100%	C	H	K1=6.66	1999WBa (90387)	459

Medium: N,N-dimethylformamide. Method: competitive titration against Ag+, using Ag+ ISE. By calorimetry: DH(K1)=-38.0 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	25°C	0.05M	C	H	K1=6.6	1996BCh (90388)	460

Medium: 0.05 M Et4NClO4. By calorimetry: DH(K1)=-20.2 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	cal	non-aq	25°C	100%	M	H	K1=11.80	1994BCd (90389)	461

Medium: acetone. DH(K1)=-63.0 kJ mol-1, TDS=4.0

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	EMF	non-aq	25°C	100%	U		K1=6.44	1993LRa (90390)	462

Medium: triethylphosphate, 0.05 M Et4NClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	20°C	100%	U		K1=6.6	1992PSa (90391)	463

Medium: DMF, 0.01 M Me4NI

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	25°C	0.05M	U		K1=6.98	1991LRc (90392)	464

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	cal	alc/w	25°C	100%	U	H	K1=7.90	1986BUd (90393)	465

In MeOH. DH=-33.9 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	95%	C		K1=7.93	1981ANa (90394)	466

Medium: 95% MeOH, 0.1 M Me4NCl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	ISE	non-aq	25°C	100%	U	I	K1=6.99	1981CRa (90395)	467

Medium: DMF. In DMSO: K1=5.84; in EtOH: 8.47; in MeCN: >10; in NMP: 6.43

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	cal	oth/un	25°C	0.10M	C			1981LIc (90396)	468

Medium: piperidine/HCl buffer, pH 11.4. DH(K1)=-21.8 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	ix	non-aq	25°C	100%	U		K1=12.87	1981SAa (90397)	469

Medium: propylene carbonate

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	ISE	non-aq	25°C	100%	U		K1=12.4	1980CRa (90398)	470

Medium: Propylene carbonate

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	EMF	non-aq	25°C	100%	C		K1=5.3	1979BLb (90399)	471

Method: Ag electrode; competition with Ag+. Medium: MeOH, 0.05 M Me4NClO4.

Li+ ISE alc/w 25°C 100% U K1=8.04 1978CSb (90400) 472
Medium: MeOH

Li+ cal R4N.X 25°C 0.06M C H 1976KLc (90401) 473
Medium: 0.057 M Me4NBr. Method: flow microcalorimetry.
DH(K1)=-21.3 kJ mol-1, DS(K1)=34 J K-1 mol-1.

Li+ gl R4N.X 25°C 0.05M C I K1=5.5 1975LSc (90402) 474
In 95% MeOH: K1=7.58; 100%: > 6
****
C14H28N2O4 L Cryptand 2,2,0 CAS 95334-31-9 (6544)
4,7,13,16-Tetraoxa-1,10-diazabicyclo[8.8.2]eicosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ ISE non-aq 25°C 100% U I K1=7.8 1991ALa (90462) 475
Medium: MeCN, 0.05 M Et4NClO4. In acetone K1=8.9, MeOH K1=4.0, DMF K1=3.5,
in pyridine K1=4.0.
****
C14H30NO2P L (2094)
P-(N,N-Diethylamidocarbonyl)methyl-P,P-dibutylphosphine oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C C K1=4.0 1999ESa (90554) 476
In tetrahydrofuran; alkali metal is used as 2,4-dinitrophenolate
---
Li+ con non-aq 25°C 100% U K1=3.11 1988YKa (90555) 477
Medium: tetrahydrofuran
****
C14H30NO4P L (2096)
P-(N,N-Diethylamidocarbonyl)methyl-P,P-dibutoxyphosphine oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=2.89 1988YKa (90558) 478
Medium: tetrahydrofuran
****
C14H30N2O4 L CAS 85726-93-8 (644)
4,10-Dimethyloxyethylidene-1,7-dioxy-4,10-diazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sol non-aq 20°C 100% C K1=4.09 1983SLa (90562) 479
Medium: CHCl3
****
C14H30N2O4 L CAS 31255-13-7 (2448)
N,N'-Dimethyl-cyclo-1,10-diaza-4,7,13,16-tetraoxaoctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	95%	C		K1=<2	2004KVa (90581)	480

Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.

****

C14H30N2O5 L (6722)

7,13-Bis(2-hydroxyethyl)-1,4,10-trioxa-7,13-diazacyclopentadecane

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	ISE	non-aq	25°C	100%	U	I	K1=2.36	1993RPa (90630)	481

Medium: dimethylformamide, 0.05 M Et4NClO4. By competition with Ag+.
In methanol, K=2.85.

****

C14H30O7 L CAS 1072-40-8 (2499)

2,5,8,11,14,17,20-Heptaoxaheneicosane; CH3.O.(CH2.CH2.O)6.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	non-aq	25°C	100%	C		K1=6.75	1998KSc (90698)	482

Medium: 1,2-dichloroethane.

Li+	con	non-aq	25°C	100%	U		K1=3.3	1993EVa (90699)	483

Medium: THF+CHCl3 (4:1 vol). Also data for other solvents

****

C15H11N3 L CAS 1148-79-4 (488)

2,2':6'2"-Terpyridine; C5H4N.C5H3N.C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	nmr	non-aq	27°C	100%	U		K1=3.24	1996MAb (91159)	484

Method: 7Li nmr. Medium: nitromethane, 0.05 M LiClO4.

****

C15H12O2 HL Diphenylacac CAS 120-46-7 (362)

1,3-Diphenylpropane-1,3-dione, Dibenzoylmethane; C6H5.CO.CH2.CO.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	100%	U		K1=4.1	1965LIa (91552)	485

Medium: MeOH, 0.1 M LiClO4

Li+	gl	diox/w	30°C	75%	U		K1=5.95	1954FUa (91553)	486

****

C15H15O2P L CAS 76229-99-7 (2091)

(Methylcarbonyl)methyldiphenylphosphine oxide; Ph2P(O)CH2C(O)Me

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=2.24	1988YSb (91913)	487

Medium: acetonitrile

****

C15H17O3P L CAS 40410-38-6 (5736)
Methyl-(diphenoxymethyl)phosphine oxide; MePO(CH2.O.Ph)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=2.05	1989TKb (91987)	488

Medium: tetrahydrofuran/CHCl3 4:1 (volume)

****

C15H18N2O8 H4L CAS 101455-18-9 (1902)
1-Methyl-3,4-diaminobenzene-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	25°C	0.10M	U		K1=2.31 K(LiL+H)=6.16 K(Li+HL)=1.43	1985MHb (92084)	489

Medium: 0.10 M Me4NCl.

****

C15H23NO3 L CAS 84227-47-4 (5814)
N-Benzyl-1-aza-4,7,10-Trioxacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	cal	non-aq	25°C	100%	C	IH	K1=4.31	1996DNa (92257)	490

Medium: CH3CN. Data for LiX where X=AsF6-,BF4-,CF3SO3-,ClO4-. DH(K1)=
-27.44 kJ mol-1, DS=-9.3. In PC, K1=4.59, DH(K1)=-24.70, DS(K1)=5.0.

****

C15H24NO2P L (7846)
N,N-Diethylcarbamoylmethyl-(P-phenyl-P-propylphosphineoxide);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C		C		K1=4.0	1999ESa (92329)	491

In tetrahydrofuran; alkali metal is used as 2,4-dinitrophenolate

****

C15H30N2O3 L CAS 72640-82-5 (6040)
4,7,13-Trioxa-1,10-diazabicyclo[8.5.5]eicosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	EMF	non-aq	25°C	100%	U	IH	K1=1.99	1993LRa (92517)	492

Medium: triethylphosphate, 0.05 M Et4NClO4. DH(K1)=-34.8 kJ mol-1,
DS=91.9 J K-1 mol-1; Data also for tri-n-butylphosphate: K1=2.36

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	25°C	0.05M	U		K1=2.40	1991LRc (92518)	493
Li+	ISE	non-aq	25°C	100%	U	I	K1=4.15	1990LAa (92519)	494

Medium: MeCN, 0.05 M Et4NClO4. In MeOH: K1=3.00; in DMF: K1=1.80;
in DEF K1=1.72, in dimethylacetamide K1=1.85

Li+ kin non-aq 25°C 100% C K1=2.80 1987ABe (92520) 495
Medium: dimethylformamide.
****
C15H33N3O3 L CAS 220811-82-5 (7916)
1,4,7-Tris((S)-2-hydroxypropyl)-1,4,7-triazacyclononane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ EMF non-aq 25°C 100% C I K1=3.39 2001WBa (92575) 496
Medium: methanol, 0.05 M Et4NClO4. In DMF, K1=3.29. Competition with Ag+.
Also data for the 1,4,7-tris((S)-2-hydroxy-2-phenyethyl- derivative.
****
C15H36NO9P3 L CAS 37909-50-5 (2634)
(N,N-Dimethylamine)methylenetris(phosphonic acid diethyl ester);
(CH3)2N.C(CH2.PO(OC2H5)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 22°C 100% U K1=2.10 1981SKd (92604) 497
Medium: CH3CN
****
C16H18NO2P L CAS 32159-22-1 (2098)
P-(N-Ethylamidocarbonyl)methyl-P,P-diphenylphosphine oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.31 1988YKa (93768) 498
Medium: tetrahydrofuran
****
C16H20O3P2 L CAS 82154-46-9 (2914)
Dimethylphosphinomethyl-diphenylphosphinomethyl-ether;Me2PO.CH2.O.CH2.PO(C6H5)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.92 1982YSa (94099) 499
Medium: tetrahydrofuran+CHCl3 4:1(vol); M is 2,4-dinitrophenolate
****
C16H24O5 L (2245)
1,3-Benzo-18-crown-5, 1,3-Benzo-5,8,11,14,17-pentaoxacyclooctadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (94344) 500
K(Li(picrate)+L)=2.0
Medium: CHCl3

Li+ dis non-aq 24°C 100% C 1977MTc (94345) 501
K(LiA+L)=2.0
Method: extraction of metal picrate (A) from H2O into CDCl3 containing L.

Data for the 5'-bromo, 5'-t-butyl, 5'-methoxy and 5'-cyanobenzo-derivs

****

C16H24O5 L AN(MOEO)2E CAS 60232-72-6 (2246)

18-Methoxy-16-methyl-3,6,9,12-tetraoxabicyclo[12.3.1]octadeca-1(18),14,16-triene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	non-aq	25°C	100%	U	H		1979KLa (94354)	502
							K(Li(picrate)+L)=3.6		

Medium: CHCl3

****

C16H24O5 L CAS 75507-20-9 (605)

Benzyloxymethyl-1,4,7,10-tetraoxacyclododecane, Benzyloxymethyl-12-crown-4;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	non-aq	22°C	100%	C			1984CBa (94360)	503
							K(Li+A+L(org)=LiAL(org))=<0		

Extraction of metal picrate from H2O into CDCl3. HA is picric acid.

For extraction into 1,2-dichloroethane, K=<0.

****

C16H24O6 L Benzo18-crown-6 CAS 14098-24-9 (513)

2,3-Benzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C		K1=4.24	2000ICa (94422)	504

Medium: nitromethane.

Li+	cal	non-aq	25°C	100%	C	H	K1=2.44	1999WBa (94423)	505

Medium: N,N-dimethylformamide. DH(K1)=-0.5 kJ mol-1.

Li+	sp	non-aq	22°C	100%	U		K1=5.77	1987CCc (94424)	506

In deuterochloroform

****

C16H24O14 H4L CAS 61696-54-6 (6104)

1,4,7,10,13,16-Hexaoxacyclooctadeca-2,3,11,12-tetracarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	25°C	0.10M	M		K1=3.8	1991FGb (94496)	507
							B(LiHL)=8.5		

Medium: 0.10 M Et4NNO3.

****

C16H26NO2P L (2093)

P-(N,N-Diethylamidocarbonyl)methyl(P-phenyl)(P-butyl)phosphine oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C		C		K1=3.9	1999ESa (94543)	508

In tetrahydrofuran; alkali metal is used as 2,4-dinitrophenolate
---
Li+ con non-aq 25°C 100% U K1=3.38 1988YKa (94544) 509
Medium: tetrahydrofuran
****
C16H28N4O8 H4L DOTA CAS 60239-18-1 (1017)
1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.10M C K1=4.32 1982DSa (94912) 510
****
C16H30O6 L CAS 17454-53-4 (5148)
Cyclohexyl-18-crown-6;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ EMF oth/un 25°C dil A 1971FRa (95101) 511
K1<0.7
****
C16H32N2O4 L Cryptand 1,2,1H CAS 119017-36-6 (6587)
4,7,14,20-Tetraoxa-1,10-diazabicyclo[8.7.5]docosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 95% M K1=4.21 1990LNa (95118) 512
Medium: 95% MeOH, 0.05 M Bu4NBr. For the 9,13-dihydroxy- analogue: K1 < 2
****
C16H32N2O5 L Cryptand 2,2,1 CAS 31364-42-8 (837)
1,10-Diaza-4,7,13,16,21-pentaoxabicyclo[8,8,5]tricosane (2,2,1);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% M M K1=6.12 1999DSd (95229) 513
K(LiL+ClO4)=0.94
Medium: acetonitrile.

Li+ cal non-aq 25°C 100% C H K1=3.48 1999WBa (95230) 514
Medium: N,N-dimethylformamide. DH(K1)=-15.4 kJ mol-1.

Li+ gl R4N.X 25°C 0.05M C K1=3.4 1996BCh (95231) 515
Medium: 0.05 M Et4NClO4.

Li+ cal non-aq 25°C 100% M H K1=8.11 1994BCd (95232) 516
Medium: acetone. DH(K1)=-38.1 kJ mol-1, TDS=7.3

Li+ sp non-aq 20°C 100% U K1=3.96 1992PSa (95233) 517
Medium: DMF, 0.01 M Me4NI

Li+ cal alc/w 25°C 100% U H K1=4.69 1986BUd (95234) 518

In MeOH. DH=-10.3 kJ mol-1

Li+ nmr non-aq 25°C 100% U K1=7.33 1986CHc (95235) 519
In CDCl3 saturated with D2O

Li+ ISE non-aq 25°C 100% C I K1=2.63 1985CKa (95236) 520
Medium: DMSO. In propylenecarbonate K1=9.67

Li+ gl alc/w 25°C 95% C K1=4.46 1981ANa (95237) 521
Medium: 95% MeOH, 0.1 M Me4NCl

Li+ ISE non-aq 25°C 100% U I K1=10.33 1981CRa (95238) 522
Medium: MeCN. In DMF: K1=3.58; in EtOH: 5.34; in DMSO: 2.77; in NMP: 3.48

Li+ ISE non-aq 25°C 100% U K1=9.6 1980CRa (95239) 523
Medium: Propylene carbonate

Li+ ISE alc/w 25°C 100% U K1=5.38 1978CSb (95240) 524
Medium: MeOH

Li+ cal R4N.X 25°C 0.06M C H 1976KLc (95241) 525
Medium: 0.057 M Me4NBr. Method: flow microcalorimetry.
DH(K1)=0 kJ mol-1, DS(K1)=48 J K-1 mol-1.

Li+ gl R4N.X 25°C 0.05M C I K1=2.50 1975LSc (95242) 526
In 95% MeOH: K1=4.18; 100%: > 5

****

C16H32N4O4 L (6794)
4,10-Bis(N,N-dimethylethanamido)-1,7-dioxa-4,10-diazacyclododecane;

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

---

Li+ cal alc/w 25°C 100% U H K1=5.38 1990KMb (95320) 527
Medium: MeOH. DH=-12.7 kJ mol-1

****

C16H32O7 L (6411)
15-(2,5-Dioxahexyl)-15-methyl-1,4,7,10,13-pentaoxacyclohexadecane;

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

---

Li+ con non-aq 25°C 100% C I K1=4.45 1992TFa (95387) 528
Medium: acetonitrile. In propylene carbonate, K1=3.06.

****

C16H34N2O5 L (6953)
7,13-Bis(2-methoxyethyl)-1,4,10-trioxa-7,13-diazacyclopentadecane;

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

---

Li+ EMF alc/w 25°C 100% U I K1=3.01 1994LLa (95416) 529
Medium: MeOH, 0.05M Et4NClO4. Also data for acetonitrile: K=9.13, PC: K=7.0

DMF: K=2.23, H2O: K<2 and pyridine: K=5.08. Method: by competition with Ag+.
****
C16H34N2O6 L CAS 69930-74-1 (1321)
N,N'-Bis(2-hydroxyethyl)-1,7,10,16-tetraoxa-4,13-diazacyclooctadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ ISE non-aq 25°C 100% U K1=2.29 1993RPa (95451) 530
Medium: dimethylformamide, 0.05 M Et4NClO4. By competition with Ag+.
****
C16H34N4O2 L CAS 60598-04-1 (1530)
4,7-Dimethyl-1,4,7,10-tetraaza-13,18-dioxabicyclo[8,5,5]eicosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.10M U K1=3.8 1978LMa (95471) 531
In CH3OH, K1>4.0. In 95 vol% CH3OH, K1>3.8.
****
C16H34O8 L CAS 1191-91-9 (2500)
2,5,8,11,14,17,20,23-Octaoxatetracosane; CH3.O.(CH2.CH2.O)7.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.6 1993EVa (95492) 532
Medium: THF+CHCl3 (4:1 vol). Also data for other solvents
****
C16H36N4 L CAS 54622-44-5 (147)
5,5,7,12,12,14-Hexamethyl-1,4,8,11-tetraazacyclotetradecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl non-aq 25°C 100% U K1=3.8 1986STb (95540) 533
Medium: THF:CHCl3 4:1 v/v. Metal ions as 2,4-dinitrophenolates
****
C16H36N4O4 L (6703)
1,4,7,10-Tetrakis(2-hydroxyethyl)-1,4,7,10-tetraazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ EMF non-aq 25°C 100% U I K1=8.07 1996WPa (95574) 534
Medium: acetonitrile, 0.05 M NEt4ClO4. In propylene carbonate K1=8.90

Li+ gl alc/w 25°C 100% C I K1=3.09 1993TCa (95575) 535
Medium: MeOH, 0.05 M Et4NClO4. In DMF, K1=2.99
****
C17H13N5O5 HL CAS 90163-26-1 (5212)
1-(4'-(5'-Hydroxy-3'-methyl-1'-phenyl)pyrazolylazo)4-nitrobenzoic acid;

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

Li+ sp mixed ? 77% U K1=4.24 1968DZa (95776) 536
Medium: 77% acetone
****
C17H20N4O6 HL Riboflavin CAS 83-88-5 (1438)
7,8-Dimethyl-10(D-1'-ribityl)isoalloxazine, Vitamin B2, Vitamin H

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sol oth/un 22°C U K1=-0.2 1980LDa (96339) 537
Medium: variable LiClO4 content 0.1-2.5 M
The same constant measured spectrophotometrically: K1=-1.2
****
C17H21O5P L (5732)
Methyldi(2-methoxyphenoxymethyl)phosphine oxide; Me.PO(CH2.O.C6H4.OMe)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=2.65 1989TKb (96392) 538
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C17H24N2O10 HL CAS 217972-81-1 (8163)
9-(2-Hydroxy-3,5-dinitrophenoxy)methyl-1,4,8,11-tetraoxacyclotetradecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% C 1990SSe (96433) 539
K(Li+HL(org)=LiL(org)+H)=-6.1
Method: extraction from aqueous phase (0.10 M MOPS, pH 7.3) into
1,2-dichloroethane. Data for 1,2-dialkyl- derivatives.
****
C17H24N4O11 L CAS 94616-60-1 (1039)
2,4,6-Trinitrophenylaminomethyl-15-crown-5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp mixed 25°C 16% U K1=2.28 1984BPa (96464) 540
K(Li+HL)=1.09
****
C17H26O5 L CAS 92818-18-3 (8987)
12-[(Phenylmethoxy)methyl]-1,4,7,10-tetraoxacyclotridecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 22°C 100% C 1984CBa (96509) 541
K(Li+A+L(org)=LiAL(org))=0.9
Extraction of metal picrate from H2O into CDCl3. HA is picric acid.
For extraction into 1,2-dichloroethane, K=1.84. In H2O, K(LiA+L)=3.80.
****
C17H26O5 L CAS 92818-15-0 (8986)
5-[(Phenylmethoxy)methyl]-1,4,7,10-tetraoxacyclotridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	non-aq	22°C	100%	C			1984CBa (96511)	542

K(Li+A+L(org)=LiAL(org))=1.59

Extraction of metal picrate from H2O into CDCl3. HA is picric acid.
For extraction into 1,2-dichloroethane, K=2.94. In H2O, K(LiA+L)=4.43.

****

C17H26O6 L CAS 99159-90-7 (688)
2,3-Benzo-1,4,7,10,13,16-hexaoxacyclononadeca-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	22°C	100%	U		K1=5.33	1987CCc (96522)	543

In deuterochloroform

****

C17H27NO5 L CAS 98269-22-8 (8844)
13-(2-Methoxyphenyl)-1,4,7,10-tetraoxa-13-azacyclopentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	alc/w	RT	50%	C	I	K1=1.5	2002GNe (96544)	544

Medium: 50% v/v MeOH/H2O, pH 7.4 (0.01 M Tris buffer), 0.1 M Me4NCl.
In 10% MeOH/H2O, K1=1.1.

****

C17H34N2O4 L CAS 142565-14-8 (6562)
4,7,13,16-Tetraoxa-1,10-diazabicyclo[8.8.5]tricosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	EMF	non-aq	25°C	100%	C		K1=5.36	1993DLb (96745)	545

Medium: propylene carbonate, 0.05 M Et4NClO4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	R4N.X	25°C	0.05M	C	I	K1=2.08	1992CGb (96746)	546

Medium: Et4NClO4. In MeOH: K1=2.30;in DMF K1=2.21; in MeCN: K1=6.07

****

C17H34N4O4S L CAS 503465-04-1 (9247)
4,7,13,16-Tetraoxa-1,10,21,23-tetraazabicyclo[8.8.7]pentacosane-22-thione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	95%	C		K1=1.23	2004KVa (96759)	547

Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.

****

C17H36N4 L (6788)
12,17-Dimethyl-1,9,12,17-tetraazabicyclo[7.5.5]nonadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	NaCl	25°C	0.15M	C		K1=2.6	1996BFc (96773)	548

****
C17H37N5 L CAS 122874-65-1 (5903)
5,12,17-Trimethyl-1,5,9,12,17-pentaazabicyclo[7.5.5]nonadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl mixed 25°C 80% C K1=5.0 1996BFc (96790) 549
Medium: 80% v/v DMSO/H2O, 0.15 M NaCl.

Li+ gl NaCl 25°C 0.15M C H 1989BBe (96791) 550
DH(K1)=-2.1 kJ mol-1, DS(K1)=54.3 J K-1 mol-1
****
C17H38O2P2 L CAS 21245-67-8 (2100)
Methylenebis(dibutylphosphine oxide); Bu2P(O)CH2P(O)Bu2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C C K1=5.0 1999ESa (96813) 551
In tetrahydrofuran; alkali metal is used as 2,4-dinitrophenolate
---
Li+ con non-aq 25°C 100% U K1=3.92 1988YKa (96814) 552
Medium: tetrahydrofuran
****
C18H15OP L CAS 791-28-6 (32)
Triphenylphosphine oxide; (C6H5)3PO

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% C M K1=4.873 1990SAb (97095) 553
K(LiClO4+L)=4.53
K(LiL+ClO4)=-0.265
Medium: propylene carbonate.

Li+ con non-aq 25°C 100% U K1=1.95 1988YSb (97096) 554
Medium: acetonitrile

Li+ con non-aq 25°C 100% U 1982GJb (97097) 555
Kout(LiL+A)=3.9
Medium: 1,2-dichloroethane. A=tetraphenylborate

Li+ con non-aq 25°C 100% U 1969SSi (97098) 556
K(LiI+L)=2.6
Medium: CH3CN
****
C18H20O5 L CAS 14262-60-3 (5616)
2,3:11,12-Dibenzo-1,4,7,10,13-pentaoxacyclopentadeca-2,11-diene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=3.003 2002YEa (97478) 557

Method: fluorescence spectroscopy. Medium: acetonitrile.
****
C18H22NO2P L (2092)
(N,N-Diethylamidocarbonyl)methyldiphenylphosphine oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C C K1=4.1 1999ESa (97507) 558
In tetrahydrofuran; alkali metal is used as 2,4-dinitrophenolate
---
Li+ con non-aq 25°C 100% U K1=3.69 1988YKa (97508) 559
Medium: tetrahydrofuran
****
C18H22O5 L (5737)
1,7-Di(2-methoxyphenyl)-1,4,7-trioxaheptane; MeO.C6H4.O.C2H4.O.C2H4.O.C6H4.OMe
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=1.65 1989TKb (97566) 560
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C18H27N2O3F L CAS 173417-90-8 (6571)
23-Fluoro-4,7,20-trioxa-1,10-diazatricyclo[8.7.5.1,12,16]tricosa-12,14,16(23)triene
;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ EMF non-aq 25°C 100% C H K1=4.34 1999BHa (97748) 561
Medium: MeOH, 0.05 M Et4NClO4. By calorimetry DH(K1)=-5.5 kJ mol-1.
Method: by competition with Ag+, using Ag/Ag+ electrode.
****
C18H28N2O3 L CAS 154148-31-9 (6510)
4,7,20-Trioxa-1,10-diazatricyclo[8.7.5.1,12,16]tricosa-12,14,16(23)-triene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ EMF non-aq 25°C 100% C H K1=0.81 1999BHa (97771) 562
Medium: MeOH, 0.05 M Et4NClO4. By calorimetry DH(K1)=-2.1 kJ mol-1.
Method: by competition with Ag+, using Ag/Ag+ electrode.
****
C18H28O5 L CAS 92818-19-4 (8988)
2-[(Phenylmethoxy)methyl]-1,4,8,11-tetraoxacyclotetradecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 22°C 100% C 1984CBa (97819) 563
K(Li+A+L(org)=LiAL(org))=2.08
Extraction of metal picrate from H2O into CDCl3. HA is picric acid.
For extraction into 1,2-dichloroethane, K=3.29. In H2O, K(LiA+L)=4.91.
****

C18H28O5 L CAS 92818-28-05 (8989)
6-[(Phenylmethoxy)methyl]-1,4,8,11-tetraoxacyclotetradecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 22°C 100% C 1984CBa (97821) 564
K(Li+A+L(org)=LiAL(org))=2.30
Extraction of metal picrate from H2O into CDCl3. HA is picric acid.
For extraction into 1,2-dichloroethane, K=2.69. In H2O, K(LiA+L)=5.15.
****
C18H28O6 L Benzo20-crown-6 (6354)
2,3-Benzo-1,5,8,11,14,18-Hexaoxacosa-2-ene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 22°C 100% U K1=5.48 1987CCc (97836) 565
In deuterochloroform
****
C18H28O6 L AN(MOEOE)2O CAS 60232-73-7 (2247)
21-Methoxy-19-methyl-3,6,9,12,15-pentaoxabicyclo[15.3.1]heneicos-1(21),17,19-triene
;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (97847) 566
K(Li(picrate)+L)=4.00
Medium: CHCl3
****
C18H28O6 L CAS 100433-53-6 (607)
Benzyloxymethyl-1,4,7,10,13-pentaoxacyclopentadecane, Benzyloxymethyl-15-crown-5;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 22°C 100% C 1984CBa (97852) 567
K(Li+A+L(org)=LiAL(org))=2.09
Extraction of metal picrate from H2O into CDCl3. HA is picric acid.
In H2O, K(LiA+L)=4.94
****
C18H28O7 L Benzo21-crown-7 (6355)
2,3-Benzo-1,4,7,10,13,16,19-Heptaoxaheneicosa-2-ene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 22°C 100% U K1=5.60 1987CCc (97857) 568
In deuterochloroform
****
C18H32N2O8 L CAS 24951-52-8 (2560)
Cryptand-2,2,2-dilactam

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

---
Li+ nmr non-aq 33°C 100% U I K1=2.64 1977HPa (98133) 569
Medium: pyridine. In THF: K1=3.12; in MeCN: 3.13
****
C18H36N2O6 L Cryptand 3,2,1 (7303)
1,10-Diaza-4,7,13,16,19,24-hexaoxabicyclo[8,11,5]hexacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ cal alc/w 25°C 95% U H K1=3.14 1997ZIa (98421) 570
Medium: 95% v/v MeOH/H2O, 0.1 M. DH(K1)=-11.7 kJ mol-1, DS=20.8 J K-1 mol-1
****
C18H36N2O6 L Cryptand 2,2,2 CAS 23978-09-8 (514)
1,10-Diaza-4,7,13,16,21,24-hexaoxabicyclo[8.8.8]hexacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% M M K1=6.21 1999DSd (98629) 571
K(LiL+ClO4)=0.72
Medium: acetonitrile.

Li+ cal R4N.X 25°C 0.10M C H 1996BCh (98630) 572
Medium: 0.10 M Et4NClO4. DH(K1)=-6.4 kJ mol-1.

Li+ EMF non-aq 25°C 100% C I K1=6.98 1995DGa (98631) 573
Medium: acetonitrile, 0.05 M Et4NClO4. In benzonitrile, K1=8.18.
Competitive method with Ag/Ag+ electrode.

Li+ cal non-aq 25°C 100% M H K1=4.62 1994BCd (98632) 574
Medium: acetone. DH(K1)=-23.9 kJ mol-1, TDS=2.4

Li+ sp non-aq 20°C 100% U K1=2.3 1992PSa (98633) 575
Medium: DMF, 0.01 M Me4NI

Li+ cal alc/w 25°C 100% U H K1=2.46 1986BUd (98634) 576
In MeOH. DH=-3.7 kJ mol-1

Li+ cal non-aq 25°C 100% U H 1986DGa (98635) 577
DH1 = -59.1 kJ mol-1. Medium: nitromethane

Li+ cal non-aq 25°C 100% U H 1985DGa (98636) 578
Medium: propylene carbonate. DH1 = -36.4 kJ mol-1

Li+ cal non-aq 25°C 100% U H 1985DGa (98637) 579
Medium: acetonitrile. DH1 = -29.8 kJ mol-1

Li+ ISE non-aq 25°C 100% M K1=11.49 1985DGb (98638) 580
Medium: nitromethane

Li+ gl alc/w 25°C 95% C K1=1 1981ANa (98639) 581

Medium: 95% MeOH, 0.1 M Me4NCl

Li+ ISE non-aq 25°C 100% U I K1=6.97 1981CRa (98640) 582
Medium: MeCN. In DMSO: < 1.0; in EtOH: < 2.3; in N-methylpropionamide: 2.97

Li+ ISE non-aq 25°C 100% U K1=6.9 1980CRa (98641) 583
Medium: Propylene carbonate

Li+ EMF non-aq 25°C 100% C I K1=4.3 1979BLb (98642) 584
Method: Ag electrode; competition with Ag+. Medium: MeOH, 0.05 M Me4NClO4. Also K1=2 (H2O), <2.0 (DMSO), 6.7 (CH3CN).

Li+ EMF oth/un 25°C 0.05M C I K1=<1.4 1978YTa (98643) 585
Method: competition with Tl+, using Tl amalgam electrode. Electrolyte not stated. In DMSO, 0.10 M: K1<1

Li+ nmr non-aq 30°C 100% U I K1=2.94 1975CDa (98644) 586
Medium: pyridine. In aqueous soln: K1=0.99

Li+ gl R4N.X 25°C 0.05M C I K1=<2.0 1975LSc (98645) 587
In 95% MeOH: K1=1.8; 100%: 2.6
****
C18H36N4O4 L (6795)
4,10-Bis(N,N-dimethylpropanamido)-1,7-dioxa-4,10-diazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ cal alc/w 25°C 100% U H K1=2.99 1990KMb (98782) 588
Medium: MeOH. DH=-23.8 kJ mol-1
****
C18H36N6O3 L (6790)
1,4,7-Tris(N,N-dimethylethanamido)-1,4,7-triazacyclononane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.10M M K1=3.91 1990KMb (98799) 589
Medium: 0.10 M Me4NNO3
****
C18H38N2O6 L CAS 85726-94-9 (645)
4,10-Dimethoxyethoxyethylidene-1,7-dioxo-4,10-diazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sol non-aq 20°C 100% C K1=3.98 1983SLa (98822) 590
Medium: CHCl3
****
C18H38N2O6 L CAS 72911-99-0 (649)
4,13-Bis(2-methoxyethyl)-1,7,10,16-tetraoxo-4,13-diazacyclooctadecane;

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

---
Li+ sol non-aq 20°C 100% C K1=3.89 1983SLa (98840) 591
Medium: CHCl3
****
C18H38O9 L Glyme-9 CAS 25990-94-7 (7806)
2,5,8,11,14,17,20,23,26-Nonaoxaheptacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% C K1=7.53 1998KSc (98875) 592
Medium: 1,2-dichloroethane.
****
C19H23O6P L (5731)
1,2:8,9-Dibenzo-5-methylphosphinyl-3,7,10,13,16-pentaoxacyclohexadeca-1,8-diene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.26 1989TKb (99346) 593
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C19H24NO2P L (2095)
P-(N,N-Diethylamidocarbonyl)methyl,P,P-diphenylphosphine oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.12 1988YKa (99348) 594
Medium: tetrahydrofuran
****
C19H30O5 L CAS 92818-26-3 (8991)
10-[(Phenylmethoxy)methyl]-1,4,8,12-tetraoxacyclopentadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 22°C 100% C 1984CBa (99431) 595
K(Li+A+L(org)=LiAL(org))=1.04
Extraction of metal picrate from H2O into CDCl3. HA is picric acid.
For extraction into 1,2-dichloroethane, K=1.91. In H2O, K(LiA+L)=3.89.
****
C19H30O5 L CAS 92818-23-0 (8990)
2-[(Phenylmethoxy)methyl]-1,4,8,12-tetraoxacyclopentadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 22°C 100% C 1984CBa (99433) 596
K(Li+A+L(org)=LiAL(org))=0.78
Extraction of metal picrate from H2O into CDCl3. HA is picric acid.
For extraction into 1,2-dichloroethane, K=1.36. In H2O, K(LiA+L)=3.65.
****
C19H39N3O5 L CAS 60598-00-7 (1537)
4-Methyl-1,4,10-triaza-7,13,16,21,24-pentaoxa-bicyclo[8,8,8]hexacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.10M U K1=1.5 1978LMa (99493) 597
In 95 vol% MeOH, K1=4.0.
****
C20H22O4 L CAS 82645-28-1 (8945)
o,o'-(Triethyleneglycoldiyl)-(Z)-stilbene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% C K1=5.47 2000ICa (99928) 598
Medium: nitromethane.
****
C20H22O6 L (6834)
1,8-Bis(2-Formyphenoxy)-3,6-dioxaoctane; (CH2.O.CH2.CH2.O.C6H4.CHO)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.3 1993EVa (99932) 599
Medium: THF+CHCl3 (4:1 vol)
****
C20H24N2O5 L CAS 165815-06-5 (8936)
N-(2-Pyridylmethylene)-4-aminobenzo-15-crown-5;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C I M 2002YPc (99952) 600
K(ZnA2L+Li)=4.13
Medium: MeCN, 0.10 M n-Bu4NPF6. By 1H nmr in CDCl3, K(ZnA2L+Li)=4.06.
A is p-thiocresol.
****
C20H24O6 L DiBz-18-Crown-6 CAS 14187-32-7 (604)
2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 25°C 100% C I K1=<0.3 2001KZb (100160) 601
Method: 7Li nmr. Medium: acetonitrile.
Data for 20-80% w/w nitrobenzene/acetonitrile.

Li+ con non-aq 25°C 100% C K1=4.79 2000ICa (100161) 602
Medium: nitromethane.

Li+ oth oth/un 25°C 0.04M C K1=-0.3 1998TIa (100162) 603
Method: capillary electrophoresis.
Medium: 0.005 M phosphate buffer, pH 7.1, 0.04 M MCl.

Li+ nmr non-aq 27°C 1.0M C I K1=0.86 1996KAb (100163) 604
Method: 7Li nmr. Medium: acetonitrile. Also data for nitromethane and

20-80% w/w acetonitrile/nitromethane.

Li+ vlt non-aq 25°C 100% U K1=11.3 1990SPa (100164) 605
Medium: 1,2-dichloroethane

Li+ con non-aq 25°C 100% U K1=4.06 1986STb (100165) 606
Medium: THF:CHCl3 4:1 v/v. M as 2,4-dinitrophenolate

Li+ con non-aq 25°C 100% U K1=3.48 1985YKa (100166) 607
Medium: EtOH+CHCl3 1:1; M is used in nitrophenolate form

Li+ con non-aq 25°C 100% U M 1982GJb (100167) 608
Kout(LiL+A)=3.2
Medium: 1,2-dichloroethane. A=tetraphenylborate
****
C20H26O6 L CAS 84884-14-0 (2236)
2,3-Naphtho-18-crown-6, 2,3-Naphtho-1,4,7,10,13,16-hexaoxacyclooctadeca-2-ene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (100347) 609
K(M(picrate)+L)=4.35
Medium: CHCl3
****
C20H32O7 L AN(MOEOEO)2E (2248)
24-Methoxy-22-methyl-3,6,9,12,15,18-hexaoxabicyclo[18.3.1]-tetracosa-1(24),20,22-tr
iene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (100492) 610
K(Li(picrate)+L)=3.5
Medium: CHCl3
****
C20H32O8 L Benzo24-crown-8 (6356)
2,3-Benzo-1,4,7,10,13,16,19,22-Octaoxatetracosa-2-ene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 22°C 100% U K1=5.52 1987CCc (100497) 611
In deuterochloroform
****
C20H34N4O HL (7763)
14,19-Dimethyl-1,11,14,19-tetraazatricyclo[9.5.5.14,8]docosa-4,6,8(22)-trien-22-ol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.15M C 2000MFa (100513) 612
K(Li+L=LiH-1L+H)=-9.1
Medium: 0.10 M NMe4Cl.

****
C20H36O6 L DiCy-18-crown-6 CAS 16069-36-6 (1653)
2,3:11,12-Dicyclohexyl-1,4,7,10,13,16-hexaoxacyclooctadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 27°C 100% C I K1=5.60 2001KZa (100663) 613
Method: 7Li nmr. Medium: nitromethane. In acetonitrile, K1=3.41

Li+ nmr non-aq 25°C 100% C I K1=2.51 2001KZb (100664) 614
Method: 7Li nmr. Medium: acetonitrile.
Data for 20-80% w/w nitrobenzene/acetonitrile.

Li+ dis non-aq 25°C 100% U K1=9.26 2000KSa (100665) 615
Medium: 1,2-dichloroethane

Li+ nmr non-aq 27°C 1.0M C I K1=3.14 1996KAb (100666) 616
Method: 7Li nmr. Medium: acetonitrile. Also data for nitromethane and
20-80% w/w acetonitrile/nitromethane.

Li+ dis non-aq 25°C 100% U H 1979KLa (100667) 617
K(Li(picrate)+L)=2.28
Medium: CHCl3

Li+ ISE oth/un 25°C dil A K1=0.6 1971FRa (100668) 618
Data for isomer A
****
C20H40N2O4 L (6625)
1,10-Diaza-4,7,13,16-tetraoxabicyclo[8.8.8]hexacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl non-aq 25°C 100% C I K1=3.7 1992LSc (100776) 619
Medium: MeCN, 0.05 M Et4NClO4. In MeOH K1=2.2; in DMF K1=1.9; in H2O K1<2
****
C20H40N2O7 L Cryptand 3,2,2 CAS 31255-22-8 (1763)
Cryptand 3,2,2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.05M C I K1=<2.0 1975LSc (100815) 620
In 95% MeOH: K1 < 2; 100%: 2.3
****
C20H42N4O4 L CAS 39678-14-3 (1543)
4,7-Dimethyl-1,4,7,10-tetraaza-13,16,21,24-tetraoxa-bicyclohexacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.10M U I K1=2.4 1978LMa (100889) 621
In CH3OH, K1>4.0, in 95 vol% CH3OH, K1=3.8.

****
C20H42O5 L CAS 9002-92-0 (8207)
1-Hydroxy-11-oxydodecane-3,6,9-trioxaundecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% C K1=1.61 1999KKb (100902) 622
Medium: MIBK. Method: distribution of metal picrates in H2O/MIBK(ligand) system. Also data for L= HO(CH2.CH2.O)n.(CH2)11.CH3, n=6 and 8.
****
C20H44N4O4 L CAS 102202-74-4 (6041)
1,4,7,10-Tetra-(2-hydroxypropyl)-1,4,7,10-tetraazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ EMF non-aq 25°C 100% C I K1=7.65 1997DMd (100928) 623
Method: Ag electrode; competitive titration. Medium: acetonitrile, 0.05 M Et4NClO4. Also data for PC (K1=6.7), MeOH (4.0), DMF (3.24), H2O (<2).
****
C20H44N4O4 L (6730)
1,4,7,10-Tetra-(2-methoxyethyl)-1,4,7,10-tetrazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl non-aq 25°C 100% U I K1=9.34 1996SDa (100942) 624
Medium: MeCN, 0.05 M Et4NClO4. In MeOH: K1=4.1, DMF: 3.61, DMSO: 2.82, propylene carbonate: 8.0

Li+ gl R4N.X 25°C 0.10M C K1=<2.0 1993SFb (100943) 625
Medium: 0.1 M Et4NClO4.
****
C21H19OP L CAS 29942-64-1 (2087)
C-Methylcarbonylmethylenetriphenylphosphorane; Ph3P:CHC(O)CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=2.75 1988YSb (101145) 626
Medium: acetonitrile
****
C21H24O8 L CAS 78708-41-5 (799)
2,3:9,10-Dibenzo-1,4,8,11,14-pentaoxacyclohexadeca-2,9-diene-6-oxyethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 80% M H K1=3.27 1985AEb (101267) 627
Medium: 80% w/w MeOH/H2O, pH=11.By calorimetry: DH(K1)=-24.8 kJ mol-1, DS(K1)=-20.4 J K-1 mol-1.
****
C21H27O8P L CAS 71817-08-8 (6905)
1,2:10,11-Dibenzo-16-methylphosphonyl)-3,6,9,12,15,17,20-heptaoxacycloeicosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 20°C 100% U K1=2.3 1982BGe (101300) 628
Medium: Acetone-D6; Method - 1H NMR
****
C21H30N7O17P3 H4L NADPH CAS 2646-71-1 (7185)
Nicotinamide adenine dinucleotide phosphate reduced;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr none RT 0 U 1995MMf (101374) 629
K1eff=1.70
Keff(2Li+L)=0.58
Medium: D2O, pH 8.5-9.5. Coordination site is the adenine or nicotinamide phosphate
****
C21H30O2P2 L (7851)
P'P'-Diphenyl-P,P-dibutylmethylenediphosphinedioxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C C K1=5.1 1999ESa (101385) 630
In tetrahydrofuran; alkali metal is used as 2,4-dinitrophenolate
****
C21H31O7P3 L CAS 82154-48-1 (2916)
Methyldi((2-dimethylphosphinylmethoxy)phenoxymethyl)phosphineoxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.54 1982YSa (101420) 631
Medium: tetrahydrofuran+CHCl3 4:1(vol); M is 2,4-dinitrophenolate
L=CH3P(O)[CH2OC6H4OCH2P(O)(CH3)2]2
****
C21H42N4O6S L CAS 503465-05-2 (9248)
4,12,18,21,26,29-Hexaoxa-1,7,9,15-tetraazabicyclo[13.8.8]hentriacontane-8-thione;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 95% C K1=1.30 2004KVa (101464) 632
Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.
****
C21H42N6O3 L (6791)
1,5,9-Tris(N,N-dimethylethanamido)-1,5,9-triazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.10M M K1=4.21 1990KMb (101475) 633
Medium: 0.10 M Me4NNO3
****

C22H20N2O4 L CAS 207461-96-9 (8955)
(5Z)-12,13,20,21-Tetrahydrotribenzo[b,f,l][1,8,11,14,4,5]tetraoxadiazacyclohexadeci
ne;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq RT 100% C K1=3.42 2000GDa (101696) 634
Medium: acetonitrile.
****
C22H25O3P L CAS 97745-35-2 (2069)
Adamantyl(diphenoxy)phosphonyl

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sol non-aq 25°C 100% U K1=3.01 1987TCa (101924) 635
Medium: CH2Cl2, 2% MeCN. Metal as picrate
****
C22H26O5 L CAS 160978-39-2 (8944)
o,o'-(Tetraethyleneglycoldiyl)-(Z)-stilbene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% C K1=6.0 2000ICa (101998) 636
Medium: nitromethane.
****
C22H28N2O6 L CAS 449740-17-4 (8937)
N-(2-Pyridylmethylene)-4-aminobenzo-18-crown-6;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C M 2002YPc (102017) 637
K(ZnA2L+Li)=1.86
Medium: MeCN, 0.10 M n-Bu4NPF6. A is p-thiocresol.
****
C22H28O7 L Dibenzo-21-Cr-7 CAS 14098-41-0 (2876)
2,3:11,12-Dibenzo-1,4,7,10,13,16,19-heptaoxacycloheneicosane-2,11-diene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.3 1993EVa (102050) 638
Medium: THF+CHCl3 (4:1 vol)
****
C22H30NO2P L CAS 97937-88-7 (2097)
P-(N,N-Dibutylamidocarbonyl)methyl,P,P-diphenylphosphine oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.58 1988YKa (102099) 639
Medium: tetrahydrofuran
****

C22H32O7P2 L (2078)
1,5-Bis(2-(dimethylphosphinylmethoxy)phenoxy)-3-oxapentane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.02 1989KSa (102207) 640
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
****
C22H36N2O6 L Bz-Cryptand 222 CAS 31250-18-7 (2269)
5,6-Benzo-4,7,13,16,21,24-hexaoxa-1,10-diazabicylo[8:8:8]hexacosa-5-ene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.05M U H K1=1.7 1998DBa (102276) 641
Medium: 0.05 M Et4NClO4. By calorimetry: DH(K1)=-5.7 kJ mol-1,
---
Li+ gl oth/un 25°C 0.02M U H K1=2.19 1980CKa (102277) 642
DH=-12.5 kJ mol-1. Alternative method: calorimetry
****
C22H36O9 L Benzo-27-Crown9 CAS 63144-76-3 (2842)
2,3-Benzo-1,4,7,10,13,16,19,22,25-nonanoxacycloheptacosa-2-ene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 22°C 100% U K1=5.47 1987CCc (102300) 643
In deuterochloroform
****
C22H40O6 L CAS 76993-47-0 (2340)
2,5,8,11,14,17-Hexaoxatricyclo[22.4.0.0(18,23)]octacosane (trans-cis-trans isomer)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 24°C 100% U M 1981BEb (102371) 644
K(Li(picrate)+L)=5.5
Medium: CDCl3
****
C22H44N2O8 L Cryptand 3,3,2 CAS 132162-57-3 (1762)
Cryptand 3,3,2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.05M C K1=<2 1975LSc (102429) 645
****
C22H44N6O5S2 L CAS 503465-08-5 (9241)
9,20,23,28,31-Pentaoxa-1,4,6,12,14,17-hexaazabicyclo[15.8.8]tritriacontane-5,13-dit
hione;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 95% C K1=<2 2004KVa (102439) 646

Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.

****

C22H46N2O8 L CAS 85726-96-1 (647)
4,10-Dimethyloxyethoxyethoxyethylidene-1,7-dioxo-4,10-diazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sol	non-aq	20°C	100%	C		K1=4.19	1983SLa (102455)	647

Medium: CHCl3

****

C22H46N2O8 L CAS 85726-97-2 (650)
4,13-Dimethyloxyethoxyethylidene-1,7,10,16-tetraoxo-4,13-diazaoctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sol	non-aq	20°C	100%	C		K1=3.88	1983SLa (102458)	648

Medium: CHCl3

****

C22H48N6O2 L CAS 39678-22-3 (1542)
4,7,13,16-Tetramethyl-1,4,7,10,13,16-hexaaza-21,24-dioxabicyclohexacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	95%	U		K1=3.5	1978LMa (102488)	649

****

C23H21O2P L CAS 1474-32-4 (2089)
C,C-Di(methylcarbonyl)methylenetriphenylphosphorane; Ph3P:C(C(O)Me)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=2.13	1988YSb (102643)	650

Medium: acetonitrile

****

C23H22N4O4 HL CAS 207800-89-3 (8966)
19,20,22,23-Tetrahydro-9-methyl-11,7-metheno-7H-dibenzotrioxatetraazacycloeicosin-2
5-ol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	diox/w	25°C	50%	C	I	K1=1.70	2001INa (102645)	651

Medium: 50% v/v dioxane/H2O, 3% v/v triethylamine; pH 12. In 50%
v/v dioxane/H2O with Et4NOH, K1=2.94.

****

C23H30N2O4 L CAS 361454-16-2 (8960)
N-(Phenylmethylene)-4-(1,4,7,10-tetraoxa-13-azacyclopentadec-13-yl)benzamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	RT	100%	C		K1=2.77	2001AVa (102751)	652

Method: spectrophotometric titration. Medium: acetonitrile.

****
C23H30N4O7 L CAS 356535-57-4 (8845)
13-[2-Methoxy-4-[(4-nitrophenyl)azo]phenyl]-1,4,7,10-tetraoxa-13-azacyclopentadecan
e;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w RT 50% C K1=ca.0.5 2002GNe (102768) 653
Medium: 50% v/v MeOH/H2O, pH 7.4 (0.1M Tris buffer), 0.1 M Me4NCl.
****
C24H24N2O4 L (5741)
1,10-Di(8-quinolyl)-1,4,7,10-tetraoxadecane; C9H6N.O.C2H4.O.C2H4.O.C2H4.O.C9H6N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.9 1989BEa (102938) 654
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C24H25O7P L (2067)
Phenylphosphonyldibenzo-17-crown-6

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sol non-aq 25°C 100% U K1=2.38 1987TCa (102965) 655
Medium: CH2Cl2, 2% MeCN
****
C24H32O6 L ANAN(MOEO)2E (2242)
2,3:4,5-Di(1,3-(2-methoxy-5-methylbenzo))-9,12,15,18-tetraoxacyclooctadeca-2,4-dien
e;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (103071) 656
K(Li(picrate)+L)=4.76
Medium: CHCl3
****
C24H32O6 L AN(MOEOM)2AN (2244)
23,24-Dimethoxy-10,21-dimethyl-3,6,14,17-tetraoxatricyclo-tetracosa-1(23),8(24),9,1
1,19,21hexaene

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (103077) 657
K(Li(picrate)+L)=2.95
Medium: CHCl3
****
C24H32O6 L DP(OEOEO)2E CAS 60985-77-5 (2237)
3,4:5,6-Bis(2-methylbenzo)-2,7,10,13,16,19-hexaoxacyclodocosa-3,5-diene;

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

---
Li+ dis non-aq 25°C 100% U H 1979KLa (103083) 658
K(Li(picrate)+L)=4.34
Medium: CHCl3
****
C24H32O8 L DiBz-24-Crown-8 CAS 14174-09-5 (580)
2,3:14,15-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracosa-2,14-diene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 27°C 100% C I K1=5.08 1998KZa (103142) 659
K(LiL+Li)=3.38
Method: 7Li nmr. Medium: nitromethane. Also data for 20-100% acetonitrile/
nitromethane. In 100% acetonitrile, K1=1.91, K(LiL+Li)<1

Li+ sp non-aq 25°C 100% U TIH K1=3.29 1995KSa (103143) 660
Medium: 10% w/w DMF/MeCN. DH(K1)=-23 kJ mol-1, DS=14 J K-1 mol-1.
Data also for 20 30, 40 w/w% DMF

Li+ con non-aq 25°C 100% U K1=4.0 1993EVa (103144) 661
Medium: THF+CHCl3 (4:1 vol)

Li+ vlt non-aq 25°C 100% U K1=13.2 1990SPa (103145) 662
Medium: 1,2-dichloroethane
****
C24H34N2O5 L CAS 182926-58-5 (8848)
7,13-Bis(2-methoxyphenyl)-1,4,10-trioxa-7,13-diazacyclopentadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w RT 50% C K1=2.5 2002GLb (103210) 663
Medium: 50% MeOH/H2O, pH 7.4 (0.1 M Tris buffer), 0.1 M Me4NCl.
****
C24H35NO9 L CAS 330462-64-1 (8032)
6,7-Dimethoxy-4-(1,4,7,10,13-pentaoxa-16-azacyclooctadec-16-ylmethyl)-2H-1-benzopyr
an-2-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp mixed 25°C 10% C K1=3.35 2001LWa (103243) 664
Method: fluorimetry. Medium: 10%v/v acetonitrile/H2O.
****
C24H36N2O4Fe L CAS 145519-34-2 (6831)
1,1'-(1,4,10,13-Tetraoxa-7,16-diazacyclooctadeca-7,16-diyldimethylferrocene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 25°C 100% U K1=3.74 1992MGa (103256) 665
Method:NMR. Medium: MeCN, 0.1 M Bu4NPF6. Data also for other ferrocene[2.2]
cryptands

****
C24H36O10P2 L (5726)
1,4-Bis(2-(diethoxyphosphinylmethoxy)phenyl)-1,4-dioxabutane;
2(EtO)2PO.CH2O.C6H4.O.CH2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.7 1989EVa (103296) 666
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C24H42O10 L (2505)
2,5,8,11,14,17,20,23,26,29-Decaoxa-15,16-benzo-triconta-15-ene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 22°C 100% U K1=5.46 1987CCc (103397) 667
In deuterochloroform
****
C24H44O5 L (2341)
16,18,23,25-Tetramethyl-2,5,8,11,14-pentaoxatricyclo(22.4.0.0(15,20))pentacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 24°C 100% U M 1981BEb (103410) 668
K(Li(picrate)+L)=4.0
Medium: CDCl3
****
C24H48N2O9 L Cryptand 3,3,3 CAS 132162-61-9 (1761)
Cryptand 3,3,3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.05M C K1=<2 1975LSc (103465) 669
****
C24H48N6O6S2 L CAS 503465-10-9 (9242)
9,12,23,26,31,34-Hexaoxa-1,4,6,15,17,20-hexaazabicyclo[18.8.8]hexatricontane-5,16-d
ithione;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 95% C K1=<2 2004KVa (103506) 670
Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.
****
C24H48N8O4 L (6789)
1,4,7,10-Tetrakis(N,N-dimethylethanamido)-1,4,7,10-tetraazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.10M M K1=5.23 1990KMb (103516) 671
Medium: 0.10 M Me4NNO3

****
C24H50N2O6 L CAS 85726-95-0 (646)
4,10-Dibutoxyethoxyethylidene-1,7-dioxo-4,10-diazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sol non-aq 20°C 100% C K1=4.05 1983SLa (103529) 672
Medium: CHCl3
****
C25H22O2P2 L CAS 207-21-8 (2099)
Methylenebis(diphenylphosphine oxide); Ph2P(O)CH2P(O)Ph2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C C K1=5.6 1999ESa (103631) 673
In tetrahydrofuran; alkali metal is used as 2,4-dinitrophenolate
---
Li+ con non-aq 25°C 100% U K1=4.73 1988YKa (103632) 674
Medium: tetrahydrofuran

Li+ con non-aq 25°C 100% U K1=4.9 1984YKa (103633) 675
Medium: tetrahydrofuran + CHCl3 4:1, Li as 2,4-dinitrophenolate
---
Li+ oth non-aq 22°C 100% U K1=2.5 1978YSa (103634) 676
Medium: 1:1 v/v CH3CN:CHCl3 1:1 v/v. Li as LiCl; for LiI K1=2.3

Li+ con non-aq 25°C 100% U 1969SSi (103635) 677
K(LiI+L)=3.3
Medium: CH3CN
****
C25H26N4O5 HL CAS 207800-93-9 (8967)
19,20,22,23,25,26-Hexahydro-9-methyl-11,7-metheno-7H-dibenzotetraoxatetraazacyclotr
icosin-28-ol

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp diox/w 25°C 50% C K1=2.36 2001INa (103652) 678
Medium: 50% v/v dioxane/H2O, 3% v/v triethylamine, pH 12.
****
C25H28NO4S+ L CAS 423763-92-2 (8996)
3-Ethyl-2-[4-(2,3,5,6,8,9-hexahydro-1,4,7,10-benzotetraoxacyclododecin-12-yl)buta-1
,3-dienyl]benz

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=1.50 2002GVc (103660) 679
Medium: acetonitrile, 0.1 M Et4NClO4.
****
C25H29NO7 L FQC CAS 215095-38-8 (8804)
4'-(Dimethylamino)-2,7-(3,6,9-trioxaundecane-1,11-dioxy)flavone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq ns 100% C K1=1.51 2000LXa (103680) 680
Medium: acetonitrile. By fluorescence, K1=1.68.
****
C25H37N2O7P L CAS 202407-79-2 (8035)
26,27-Dimethoxy-3,7,24-triMe-11,14,17,20-tetraoxa-2,4-diaza-phosphatricycloheptacos
ahexaeneoxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 20°C 100% C 1998DDc (103758) 681
K(LiP+L)=3.48
Medium: CHCl3. P is picrate.
****
C25H50N2O4 L (2317)
N,N'-Diheptyl-N,N',5,5'-tetramethyl-3,7-dioxanonanediamide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 25°C 100% U I M 1980OEa (103827) 682
K(Li(ClO4)+L)=6.0
K(Li(ClO4)L+L)=2.3
Medium CH2Cl2. In CH3CN: K(Li(ClO4)+L)=3.0, K(Li(ClO4)L+L)=1.0. In pyridine:
K(Li(ClO4)+L)=0.04. In MeCN: K(Li(ClO4)L+L)=1.23
****
C25H50N4O8S L CAS 503465-06-3 (9249)
4,7,15,18,24,27,32,35-Octaoxa-1,10,12,21-tetraazabicyclo[19.8.8]heptatriacontane-11
-thione;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 95% C K1=2.84 2004KVa (103845) 683
Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.
****
C26H20 L CAS 2039-68-1 (1741)
Tetraphenylethylene; (C6H5)2C:C(C6H5)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 20°C 100% U T K1=4.27 1975LLa (103853) 684
Medium: THF. K1=4.24 (10 C); 4.20 (0 C); 4.18(-10 C); 4.10 (-30 C);
4.05 (-40 C); 4.02 (-50 C); 4.00 (-70 C)
****
C26H21OP L CAS 33078-07-8 (2088)
C-Phenylcarbonylmethylenetriphenylphosphorane; Ph3P:CHC(O)Ph

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

Li+ con non-aq 25°C 100% U K1=2.42 1988YSb (103856) 685
Medium: acetonitrile
****
C26H24N4O5 L CAS 188838-26-8 (7359)
Dipyrido[3,2-a:2',3'-c]-phenazo-(1,4,7,10,13-pentaoxacyclopentadecane);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C I 2002YPb (103900) 686
K(CuLA2+Li)=3.37
Medium: MeCN, 0.10 M Bu4NPF6. By nmr, K=3.07. Also data for acetone/
0.01 M Bu4NPF6: K=1.97 (1.75 by nmr). A is triphenylphosphine.

Li+ sp non-aq 25°C 100% C I 2002YPb (103901) 687
K(ZnLA2+Li)=3.76
Medium: MeCN, 0.10 M Bu4NPF6. A is CH3.C6H4.SH

Li+ sp non-aq 25°C 100% U I M 1997YLa (103902) 688
K(Ru(II)(bpy)2L+Li)=3.45
Medium: CH3CN;0.1M NBu4PF6. In (CH3)2CO: K=1.64. Data also for
bis(4,4'-di-tert-butylbipyridyl) and bis(phenanthroline) RuL complexes.
****
C26H24O2P2 L (6648)
Bis(diphenylphosphinyl)ethane; (C6H5)2PO.CH2CH2.PO(C6H5)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.3 1990EAb (103912) 689
Medium: THF+CHCl3 4:1(vol). Metal as 2,4-dinitrophenolate
****
C26H24O3P2 L (7158)
1,3-Bis(diphenylphosphinyl)-2-oxopropane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C C K1=4.2 1999TEa (103919) 690
In: tetrahydrofurane/CHCl3 4:1 v/v

Li+ oth non-aq 25°C 100% U K1=4.2 1995TEa (103920) 691
Medium: tetrahydrofurane:CHCl3 4:1 (v/v).
Metal ion is used as 2,4-dinitrophenolate.
****
C26H28N2O5 L (2155)
1,13-Di-(8-quinolyl)-1,4,7,10,13-tetraoxatridecane; C9H6N.O.(CH2.CH2.O)4.C9H6N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 27°C 100% C IH K1=4.3 1996TJa (103979) 692
K(LiL+Li)=2.45
Method: 7Li nmr. Medium: acetonitrile. Data for 27-67 C. DH(K1)=-16 kJ

mol-1, DS=30 J K-1 mol-1; DH(LiL+Li)=10, DS=81. Also data in nitromethane.
****
C26H34N4 L CAS 677034-80-9 (9063)
1-(2-{10-[2-Piperazinoethyl]-9-anthryl}ethyl)piperazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	25°C	100%	C		K1=4.72 K(LiL+Li)=2.74	2003GHa (104075)	693

Method: fluorescence spectroscopy. Medium: acetonitrile, 0.05 M Et4NClO4.
****
C26H36N2O6 L DiBzCryptand222 (746)
5,6,14,15-Dibenzo-4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo[8.8.8]hexacosan-5,14-di
ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	cal	non-aq	25°C	100%	U	IH		1988DSa (104137)	694

Medium: MeCN. DH(K1)=-33.0 k J mol-1. Also data in propylene carbonate.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	ISE	non-aq	25°C	100%	U	M	K1=6.06	1987DSa (104138)	695

Medium: acetonitrile
****
C26H40O11P2 L (5727)
1,7-Bis(2-(diethoxyphosphinylmethoxy)phenyl)-1,4,7-trioxaheptane;2(EtO)2PO.CH2OC6H4
C2H4OC2H4)2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=3.7	1989EVa (104244)	696

Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C26H45N3O6 L CAS 111928-04-2 (8968)
7-Phenyl-4,10,16,19,24,27-hexaoxa-1,7,13-triazabicyclo[11.8.8]nonacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	none	25°C	dil	C		K1=5.96 K(Li+A+L(org)=LiAL(org))=3.10	1987BBf (104280)	697

Method: extraction of metal picrate from H2O into CHCl3.
****
C26H48O6 L (2342)
19,21,26,28-Tetramethyl-2,5,8,11,14,17-hexaoxatricyclo[22.4.0.0(18,23)]octacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	nmr	non-aq	24°C	100%	U	M	K(Li(picrate)+L)=5.1	1981BEb (104310)	698

Medium: CDCl3
****

C26H52N2O5 L Cryptand 221D CAS 62002-40-8 (8956)
5-Decyl-4,7,13,16,21-pentaoxa-1,10-diazabicyclo[8.8.5]tricosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	M	M	K1=5.91 K(LiL+ClO4)=1.14	1999DSd (104322)	699

Medium: acetonitrile.

****

C26H52N6O7S2 L CAS 503465-16-5 (9245)
4,12,20,26,29,34,37-Heptaoxa-1,7,9,15,17,23-hexaazabicyclo[21.8.8]nonatriacontane-8,16-dithione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	95%	C		K1=<2	2004KVa (104340)	700

Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.

****

C26H52N6O7S2 L CAS 503465-12-1 (9243)
9,12,15,26,29,34,37-Heptaoxa-1,4,6,18,20,23-hexaazabicyclo[21.8.8]nonatricontane-5,19-dithione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	95%	C		K1=<2	2004KVa (104350)	701

Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.

****

C26H54N2O10 L CAS 85726-99-4 (652)
4,13-Dimethyloxyethoxyethoxyethylidene-1,7,10,16-tetraoxy-4,13-diazaoctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sol	non-aq	20°C	100%	C		K1=4.03	1983SLa (104361)	702

Medium: CHCl3

****

C27H26O2P2 L (6811)
1,2-Bis(2-Diphenylphosphinyl)-1-methylethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=4.0	1990EAb (104397)	703

Medium: THF+CHCl3 4:1(vol). Metal as 2,4-dinitrophenolate. Data also for 1,1-dimethyl, 1-hexyl, 1-heptyl, 1-octyl and 1-decyl analogues

****

C27H26O3P2 L (6812)
1,2-Bis(2-Diphenylphosphinyl)-1-hydroxymethylethane;
(C6H5)2PO.CH(CH2OH)CH2.PO(C6H5)2

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

Li+ con non-aq 25°C 100% U K1=4.2 1990EAb (104402) 704
Medium: THF+CHCl3 4:1(vol). Metal as 2,4-dinitrophenolate. Data also for 3-hydroxypropyl analogue
****
C27H26O3P2 L (7159)
1,4-Bis(diphenylphosphinyl)-2-oxobutane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ oth non-aq 25°C 100% U K1=4.9 1995TEa (104407) 705
Medium: tetrahydrofurane:CHCl3 4:1 (v/v).
Metal ion is used as 2,4-dinitrophenolate.
****
C27H32NO5S+ L CAS 423763-94-4 (8997)
3-Ethyl-2-[4-(2,3,5,6,8,9,11,12-octahydro-1,4,7,10,13-benzopentaoxacyclopentadecin-15-yl)butadien
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=4.16 2002GVc (104517) 706
Medium: acetonitrile, 0.1 M Et4NClO4.
****
C27H33NO7 L FLC CAS 223390-37-2 (8805)
2-[4-Dimethylaminophenyl]-6-methyl-3-(1,4,7,10-tetraoxacyclododec-2-ylmethoxy)-4H-1-Benzopyran-4;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq ns 100% C K1=3.02 2000LXa (104525) 707
Medium: acetonitrile. Method: fluorescence spectroscopy.
****
C27H47N3O6 L (8029)
Tripodal ionophore 3;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C 2001LFa (104625) 708
K(LiP+L=LiPL)=5.11
Method: Analyses by spectrophotometry. Medium: chloroform. P is picrate.
****
C28H24N2O4 L (5742)
5,6-Benzo-1,10-di(8-quinolyl)-1,4,7,10-tetraoxadecane;
C9H6N.O.C2H4.O.C6H4.O.C2H4.O.C9H6N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.4 1989BEa (104676) 709
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C28H28O3P2 L (6815)

1,5-Bis(diphenylphosphinyl)-3-oxapentane; O(CH2.CH2.PO(C6H5)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=5.15 1993EBa (104712) 710
Medium: CH3CN

Li+ con non-aq 25°C 100% U K1=5.6 1993EVa (104713) 711
Medium: THF+CHCl3 (4:1 vol). Also data for other solvents

Li+ con non-aq 25°C 100% U K1=5.3 1992BEa (104714) 712
Medium: THF+CHCl3 (4:1 vol)
****
C28H28O4P2 L (7891)
1,6-Bis(diphenylphosphinyl)-2,5-dioxohexane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C C K1=5.7 1999TEa (104722) 713
In: tetrahydrofurane/CHCl3 4:1 v/v
****
C28H30N2O2P2 L CAS 68745-29-9 (5707)
N,N'-Bis(diphenylphosphinylmethyl)-1,2-diaminoethane; ((C6H5)2PO.CH2.NH.CH2-)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.4 1984YKa (104727) 714
Medium: therahydrofuran + CHCl3 4:1, Li as 2,4-dinitrophenolate
****
C28H32N2O6 L (5743)
1,16-Di(8-quinolyl)-1,4,7,10,13,16-hexaoxahexadecane; C9H6N.O.(C2H4O)5.C9H6N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.4 1989BEa (104750) 715
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C28H35O7P L CAS 90275-27-7 (2068)
Adamantylphosphonyldibenzo-17-crown-6

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sol non-aq 25°C 100% U K1=3.86 1987TCa (104768) 716
Medium: CH2Cl2, 2% MeCN. Metal as picrate
****
C28H36N2O7S2 HL CAS 150196-54-6 (7735)
3-(3-Sulfopropyl)-2-[4-[N-(1,4,7,10,13-pentaoxa-16-azacyclooctadeca)]]styryl-benzot
hiazolium;

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

---
Li+ sp non-aq 18°C 100% C K1=2.2 1997LHa (104784) 717
Medium: acetonitrile.
****
C28H40O8 L AN(MOEOEOM)2AN (2243)
29,30-Dimethoxy-13,27-dimethyl-3,6,9,17,20,23-hexaoxatricyclo-triconta-1,11,13,15,25,27-hexaene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (104857) 718
K(Li(picrate)+L)=2.75
Medium: CHCl3
****
C28H40O10 L DiBz-30-crown10 CAS 104946-67-0 (1776)
2,3:17,18-Dibenzo-1,4,7,10,13,16,19,22,25,28-decaoxacyclotriaconta-2,17-diene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U I K1=4.68 1991ASb (104892) 719
Medium: 1,2-dichlorethane. In nitromethane: K1=4.49

Li+ vlt non-aq 25°C 100% U K1=14.2 1990SPa (104893) 720
Medium: 1,2-dichloroethane
****
C28H44O12P2 L (5728)
1,10-Bis(2-(diethoxyphosphinylmethoxy)phenyl)-1,4,7,10-tetraoxadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.0 1989EVa (104946) 721
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C28H52O5 L (2339)
16,16,18,18,23,23,25,25-Octamethyl-2,5,8,11,14-pentaoxatricyclo(22.4.0.0(15,20))pentacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 24°C 100% U M 1981BEb (105010) 722
K(Li(picrate)+L)=3.9
Medium: CDCl3
****
C28H52O6 L (5352)
Di(t-butylcyclohexyl)-18-crown-6

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ oth oth/un 25°C dil U K1=<0.9 1970MSa (105016) 723
****

C28H56N2O6 L Cryptand 222D CAS 69878-46-2 (8957)
5-Decyl-4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo[8.8.8]hexacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	M	M	K1=5.28 K(LiL+ClO4)=1.20	1999DSd (105030)	724

Medium: acetonitrile.

****

C28H56N6O8S2 L CAS 503465-18-7 (9246)
4,12,15,23,29,32,37,40-Octaoxa-1,7,9,18,20,26-hexaazabicyclo[24.8.8]dotetracontane-8,19-dithione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	95%	C		K1=<2	2004KVa (105041)	725

Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.

****

C28H56N6O8S2 L CAS 503465-14-3 (9244)
9,12,15,18,29,32,37,40-Octaoxa-1,4,6,21,23,26-hexaazabicyclo[24.8.8]dotetratriconta ne-5,22-dithio

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	95%	C		K1=<2 B2= 6.03	2004KVa (105051)	726

Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.

****

C29H30O3P2 L CAS 176849-77-7 (7160)
1,6-Bis(diphenylphosphinyl)-2-oxohexane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	oth	non-aq	25°C	100%	U		K1=4.8	1995TEa (105080)	727

Medium: tetrahydrofurane:CHCl3 4:1 (v/v).
Metal ion is used as 2,4-dinitrophenolate.

****

C29H30O3P2 L CAS 176849-78-8 (7161)
1,6-Bis(diphenylphosphinyl)-3-oxohexane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	oth	non-aq	25°C	100%	U		K1=4.8	1995TEa (105085)	728

Medium: tetrahydrofurane:CHCl3 4:1 (v/v).
Metal ion is used as 2,4-dinitrophenolate.

****

C29H30O4P2 L (7897)
1,7-Bis(diphenylphosphinyl)-2,6-dioxoheptane;

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

Li+ con non-aq 25°C C K1=5.8 1999TEa (105090) 729
In: tetrahydrofurane/CHCl3 4:1 v/v
****
C29H35NO5 L CAS 201154-06-5 (7825)
N-(1-Pyrenylmethyl)-1,4,7,10,13-pentaoxa-16-azacyclooctadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp mixed 25°C 90% C 1997KKa (105101) 730
K(LiSCN+L)=1.68
Method: fluorescence emission. Medium: MeOH/CHCl3 (9:1 v/v).
****
C29H36NO6S+ L CAS 423763-96-6 (8998)
2-[4-(2,3,5,6,8,9,11,12,14,15-Decahydro-1,4,7,10,13,16-benzohexaoxacyclooctadecin-1
8-yl)butadien

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=1.98 2002GVc (105106) 731
Medium: acetonitrile, 0.1 M Et4NClO4.
****
C30H32O4P2 L (6816)
1,8-Bis(diphenylphosphinyl)-3,6-dioxaoctane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=5.50 1993EBa (105229) 732
Medium: CH3CN. Data also for 3,5,8-trioxa, 3,5,8,11-tetraoxa and 3,5,8,11-pe
ntaoxa analogues

Li+ con non-aq 25°C 100% U K1=5.1 1992BEa (105230) 733
Medium: THF+CHCl3 (4:1 vol)
****
C30H32O5P2 L (7892)
1,9-Bis(diphenylphosphinyl)-2,5,8-trioxononane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C C K1=5.1 1999TEa (105236) 734
In: tetrahydrofurane/CHCl3 4:1 v/v
****
C30H34N2O2P2 L CAS 68743-31-3 (2066)
Diaminoethane-N,N'-di-2-ethyldiphenylphosphine oxide; (CH2.NH.C2H4.P(O)(C6H5)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.77 1986STb (105241) 735
Medium: THF:CHCl3 4:1 v/v. M as 2,4-dinitrophenolate
****
C30H36N8O3 Furan-cryptand CAS 121954-37-8 (7451)

39,40,41-Trioxa-1,4,11,14,17,24,29,36-octaazapentacyclo[12.12.12.1.1.1]henLetetraco
ntadodecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% U K1=3.91 1996AAb (105255) 736
Medium: MeCN. L = 39,40,41-Trioxa-1,,4,11,14,17,24,29,36-octaazapen
tacyclo[12.12.12.1(6,9).1(19,22).1(31,34]hentetetraconta-4,6,8.....dodecaene
****
C30H36O6 L ANANAN(MOE)2O (2239)
2,3,4,5,6,7,8,9,10-Tri(1,3-(2-methoxy-5-methylbenzo))-12,15,18-trioxacyclooctadeca-
2,5,8-triene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (105261) 737
K(Li(picrate)+L)=5.25
Medium: CHCl3
****
C30H37N5O7 HL CAS 552856-74-3 (8846)
7-[2-Methoxy-4-[(4-nitrophenyl)azo]phenyl]-13-(2-methoxyphenyl)-1,4,10-trioxa-7,13-
diazacyclopen;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w RT 50% C K1=1.8 2002GLb (105267) 738
Medium: 50% MeOH/H2O, pH 7.4 (0.1 M Tris buffer), 0.1 M Me4NCl.
****
C30H38N2O4 L (5828)
Trimethoxyphenylcryptand 3,1.
25,26,27-Trimethoxy-5,10,15-trimethyl-22-oxa-1,19-diazatetra-
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 25°C 100% U K1=<4.94 1986CHc (105273) 739
In CDCl3. L=25,26,27-Trimethoxy-5,10,15-trimethyl-22-oxa-1,19-diazatetracycl
o[24.1(3,7).1(8,12).1(13,17)]heptacosa-3,5,7,8,10,12,13,15,17-nonaene
****
C30H38N2O8 L CAS 137571-97-2 (6821)
Anthraquinone[2.2]cryptand;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 21°C 100% U K1=4.61 B2=6.83 1992CSc (105278) 740
Method:NMR. Medium:CD3CN
****
C30H42O10P4 L CAS 97910-31-1 (2083)
Tris-((2-(dimethylphosphinylmethoxy)phenoxy)methyl)phosphine oxide;

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

```
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=4.49        1989KSa (105302) 741
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
********************************************************************************
C30H48O13P2             L                      CAS 112120-14-6  (5729)
1,13-Bis(2-(diethoxyphosphinylmethoxy)phenyl)-1,4,7,10,13-pentaoxatridecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=4.0         1989EVa (105344) 742
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
********************************************************************************
C31H34O4P2              L                        (7157)
1,9-Bis(diphenylphosphinyl)-3,7-dioxononane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        oth non-aq 25°C 100%  U        K1=4.7         1995TEa (105526) 743
Medium: THF:CHCl3 4:1 v/v. Li as 2,4-dinitrophenolate. Also other         si
milar ligands
********************************************************************************
C32H28O4P2              L                      CAS 88928-04-5  (2072)
1,2-Dihydroxybenzene bis(diphenylphosphinylmethyl) ether
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C       C        K1=4.7         1999TEa (105576) 744
In: tetrahydrofurane/CHCl3 4:1 v/v
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=4.40        1989KSa (105577) 745
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
********************************************************************************
C32H29O3P3              L                      CAS 21851-89-8  (2640)
P,P,P',P",P"-Pentaphenyldimethylenetri(phosphineoxide); (Ph2P(O)CH2)2P(O)Ph
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  U    M                   1981SPb (105583) 746
                                          K(LiI+L)=2.69
Medium: CH3CN
********************************************************************************
C32H36O5P2              L                      CAS 137728-07-5  (6837)
1,11-Bis(diphenylphosphinyl)-3,6,9-trioxaundecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=5.4         1992BEa (105646) 747
Medium: THF+CHCl3 (4:1 vol)
********************************************************************************
C32H36O6P2              L                        (7893)
```

1,12-Bis(diphenylphosphinyl)-2,5,8,11-tetraoxododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C		C		K1=4.8	1999TEa (105651)	748

In: tetrahydrofurane/CHCl3 4:1 v/v

****

C32H43N2O7S HL CAS 189057-31-6 (7756)
3-(4-Carboxybutyl)-2-[4-[N-(1,4,7,10,13-pentaoxa-16-azacyclooctadeca)]]styryl-benzo thiazolium;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	18°C	100%	C		K1=1.9	1997LHa (105757)	749

Medium: acetonitrile.

****

C32H44O12P2 L CAS 112120-16-8 (5738)
3,4:9,10:15,16-Tribenzo-1,18-di(diethoxyphosphinyl)-2,5,8,11,14,17-hexaoxaoctadeca-3.9.15-triene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=3.7	1989BEa (105777)	750

Medium: tetrahydrofuran/CHCl3 4:1 (volume)

****

C32H48N2O3 L CAS 170801-55-5 (8952)
1,5-Bis[2,2'-azo-4,4'-(1,1,3,3-tetramethylbutyl)phenoxy]-3-oxapentane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	RT	100%	C		K1=3.28	2000GDa (105795)	751

Medium: acetonitrile.

****

C32H52O14P2 L CAS 112120-15-7 (5730)
1,13-Bis(2-(diethoxyphosphinylmethoxy)phenyl)-1,4,7,10,13,16-hexaoxahexadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=3.7	1989EVa (105824)	752

Medium: tetrahydrofuran/CHCl3 4:1 (volume)

****

C33H28O2P2 L CAS 118448-50-3 (2085)
C-Methylcarbonyl,C-diphenylphosphinylmethylenetriphenylphosphorane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=2.98	1988YSb (105871)	753

Medium: acetonitrile

****

C33H39N11 L Pyr-cryptand CAS 141258-00-6 (7452)

1,4,12,15,18,26,31,39,42,43,44-Undecaazapentacyclo[13.13.13.1.1.1]tetratetetraconta
pentadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% U K1=2.36 1996AAb (105918) 754
Medium: CH3CN. L = 11,4,12,15,18,26,31,39,42,43,44-undecazapentacyclo[13.13
.13.1(6,10).1(20,24).1(33,37)]tetratetraconta-4-6-8-10(44),11...pentadecaene
****
C33H41N3O6 L (8027)
Tripodal ionophore ;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C 2001LFa (105924) 755
K(LiP+L=LiPL)=5.37
Method: Analyses by spectrophotometry. Medium: chloroform. P is picrate.
****
C34H36N4O10 H4L CCE (7373)
N,N'-Bis(2-hydroxy-5-nitrobenzyl)4,13-diazadibenzo-18-crown-6;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w 25°C 70% U K1=9.75 B2=17.90 1995VZa (106008) 756
K3=6.20
K4=3.60
Medium: 70% MeOH
****
C34H38O12P2 L (6906)
1,2:10,11:15,16:24,25-Tetrabenzo-13,27-di(methylphospha)-3,6,9,12,14,17,20,23,27,28
-10-crown-28

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ oth non-aq 22°C 100% U K1=1.9 1978YSa (106040) 757
Medium: 1:1 v/v EtOH+CHCl3. Li as acetate salt
****
C34H40O6P2 L CAS 137728-08-6 (6838)
1,14-Bis(diphenylphosphinyl)-3,5,8,11-tetraoxatetradecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=5.6 1992BEa (106044) 758
Medium: THF+CHCl3 (4:1 vol)
****
C34H40O7P2 L (7894)
1,15-Bis(diphenylphosphinyl)-2,5,8,11,14-pentaoxopentadecane;

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

Li+ con non-aq 25°C C K1=4.7 1999TEa (106051) 759
In: tetrahydrofurane/CHCl3 4:1 v/v
****
C34H44N2O5 L CAS 101671-92-5 (5825)
Trimethoxyphenylcryptand 3,1,1.
30,31,32-Trimethoxy-5,10,15-trimethyl-22,27-dioxo-1,9-diaza....

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 25°C 100% U K1=13.79 1986CHc (106069) 760
CDCl3. L=30,31,32-Trimethoxy-5,10,15-trimethyl-22,27-dioxa-1,19-diazapentacy
clo[17.5.5.1(3,7).1(8,12).1(13,17)]dotriaconta-3,5,7,8,10,12,13,15,17nonaene
****
C34H53O8Br H2L CAS 38784-08-6 (2336)
5-Bromolasalocid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 100% M H 1988PJa (106099) 761
K(Li+HL)=1.8
Medium: MeOH. DH = 8.2 kJ mol-1; DS = 62
****
C34H54O8 H2L Lasalocid CAS 25999-20-6 (2335)
Lasalocid acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 20°C 100% C 1998MLa (106142) 762
K(Li+HL)=0.0
Medium: CD3OD. Method: 13C nmr.

Li+ dis oth/un 25°C 0.0 U K1=2.2 1992LPb (106143) 763

Li+ gl alc/w 25°C 100% M H 1988PJa (106144) 764
K(Li+HL)=1.9
Medium: MeOH. DH = 4.9 kJ mol-1; DS = 53

Li+ gl alc/w 25°C 100% U 1982BDc (106145) 765
K(Li+2HL)=1.44
Medium: MeOH
****
C35H45N9 L CAS 312304-65-7 (7962)
29,32,35-TriMe-1,14,29,32,35,38,39,40,41-Nonaazahexacyclohentetraconta-3,5,7,8,10,1
2,16,18,20,21,

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl R4N.X 25°C 0.10M U K1=3.4 2001BBa (106203) 766
K(LiL+H)=9.5
K(LiHL+H)=9.3

Medium: 0.10 M NMe4NO3.
****
C36H32N2O6 L (5744)
5,6:11,12-Dibenzo-1,16-di(8-quinolyl)-1,4,7,10,13,16-hexaoxahexadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.1 1989BEa (106220) 767
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C36H36N24O12 L Cucurbituril CAS 283175-97-3 (6744)
Cucurbit[6]uril;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ cal mixed 25°C 50% C H K1=2.38 1998BJb (106263) 768
Medium: 50% (v/v) HCOOH/H2O. DH(K1)=-3.4 kJ mol-1

Li+ sp none 25°C 0 U K1=2.23 B2=2.73 1994HKa (106264) 769
****
C36H36O4P2 L (2073)
3-t-Butyl-1,2-dihydroxybenzene bis(diphenylphosphinylmethyl) ether
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.25 1989KSa (106281) 770
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
****
C36H36O6P2 L CAS 103990-64-3 (2077)
1,2-Bis(2-(diphenylphosphinylmethoxy)ethoxy)benzol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.20 1989KSa (106285) 771
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
****
C36H40O4S2 L ANAN(MSM)2ANAN CAS 1129-04-9 (2240)
Tetra(1,3-(2-methoxy-5-methylbenzo))-9,18-dithiacyclooctadeca-2,5,12,14-tetraene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (106295) 772
K(Li(picrate)+L)=2.96
Medium: CHCl3
****
C36H40O6 L ANANAN(MOM)2AN CAS 1129-07-2 (2238)
Tetra(1,3-(2-methoxy-5-methylbenzo))-12,18-dioxacyclooctadeca-2,5,8,14-tetraene;

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

Li+ dis non-aq 25°C 100% U H 1979KLa (106301) 773
K(Li(picrate)+L)=2.91
Medium: CHCl3
****
C36H44O7P2 L (5725)
1,17-Di(diphenylphosphinyl))-3,6,9,12,15-pentaoxaseptadecane;
Ph2PO.C2H4(O.C2H4)4OC2H4POPh2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=5.5 1992BEa (106336) 774
Medium: THF+CHCl3 (4:1 vol)

Li+ cal non-aq 25°C 100% U K1=3.5 1991SGa (106337) 775
K(Li+LiL)=2.70
****
C36H44O8P2 L (7895)
1,18-Bis(diphenylphosphinyl)-hexaoxooctadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C C K1=4.6 1999TEa (106345) 776
In: tetrahydrofurane/CHCl3 4:1 v/v
****
C36H47N3O6 L (8028)
Tripodal ionophore 2;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C 2001LFa (106375) 777
K(LiP+L=LiPL)=5.21
Method: Analyses by spectrophotometry. Medium: chloroform. P is picrate.
****
C36H48N2O6 L CAS 101695-36-7 (5826)
Trimethoxyphenylcryptand 3,2,1.
33,34,35-Trimethoxy-5,10,15-trimethyl-22,25,30-trioxa-1,19-diaza-
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ nmr non-aq 25°C 100% U K1=9.79 1986CHc (106379) 778
In CDCl3. L=33,34,35-trimethoxy-5,10,15-trimethyl-22,25,30-trioxa-1,19-diaza
pentacyclo[17.8.5.1(3,7).1(8,12).1(13,17)]pentatriaconta-3,5,7,8,....nonaene
****
C36H52O14P2 L (5739)
3,4:12,13:21,22-Tribenzo-1,24-di(diethoxyphosphinyl)-2,5,8,11,14,17,20,23-octaoxate
tracosatriene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.9 1989BEa (106397) 779

Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C36H58N10O10S4 H5L CAS 136685-24-0 (6875)
(1-Cys-,1'-Cys,4-Cys-,4'-Cys)-dithiobis(Ac-1-Cys-Pro-D-Val-4-Cys-NH2);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	non-aq	20°C	100%	U		K1=2.60	1993EAa (106442)	780

Method: circular dichroism. Medium: MeCN, ClO4-
****
C36H62O11 HL Monensin CAS 17090-79-8 (737)
Monensin, 1,6-dioxaspiro[4,5]decane derivative;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C		K1=4.4	1997PBb (106511)	781

Medium: acetonitrile. Additional method: potentiometry with ISE.
By calorimetry, DH(K1)=-31 kJ mol-1, DS(K1)=-21 J K-1 mol-1.

Li+	vlt	non-aq	25°C	100%	C	I	K1=12.1	1997WRa (106512)	782

Method: cyclic voltammetry. Medium: acetonitrile, 0.05 M Et4NClO4. In DMSO
K1=3.8; in acetone, K1=11.0; in hexamethylphosphoric triamide, K1<1.

Li+	vlt	non-aq	23°C	100%	U	I	K1=12.1	1994FRa (106513)	783

Medium: MeCN. In PrCN: K1=12.2; acetone: 11.0; DMF: 6.0; Me-pyrrol.: 4.7;
NN-DMA: 4.3; DMSO: 3.8; Di-Et-formamide: 3.5; Di-Et-acetamide: 2.8; PC: 11.5

Li+	ISE	alc/w	25°C	100%	M		K1=3.60	1984CTa (106514)	784

Medium: MeOH

Li+	ISE	non-aq	25°C	100%	M		K1=5.90	1984CTa (106515)	785

Medium: N,N-dimethylformamide. In DMSO K1=3.71

Li+	ISE	alc/w	25°C	100%	U		K1=5.35	1984CTb (106516)	786

Medium: EtOH

Li+	vlt	alc/w	25°C	100%	U		K1=3.3	1978HPa (106517)	787

Method: Cyclic voltametry
****
C38H30O2P2 L CAS 118448-51-4 (2086)
C-Phenylcarbonyl,C-diphenylphosphinylmethylenetriphenylphosphorane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	U		K1=2.56	1988YSb (106640)	788

Medium: acetonitrile
****
C38H32O3P2 L (6804)
1,3-Bis(2-Diphenylphosphinylphenyl)-2-oxapropane; O(CH2.C6H4(PO.(C6H5)2)

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=5.5         1993BEb (106643) 789
Medium: THF+CHCl3   4:1(vol)
*************************************************************************
C38H32O4P2             L                        (1320)
1,4-Di(2-diphenylphosphinylphenyl)-1,4-dioxabutane;
Ph2PO.C6H4.O.CH2.CH2.O.C6H4.P(O)Ph2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=5.8         1991EBa (106649) 790
Medium: THF+CHCl3 4:1(vol)
*************************************************************************
C38H40O6P2             L                        (6833)
1,2-Bis(2-(2-(diphenylphosphinyl)ethoxy)ethoxy)benzene;
C6H4(OCH2CH2OCH2CH2PO(C6H5)2)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=5.5         1993EVa (106660) 791
Medium: THF+CHCl3 (4:1 vol). Also data for other solvents
*************************************************************************
C38H48O8P2             L                    CAS 145864-37-5  (6839)
1,20-Bis(diphenylphosphinyl)-3,5,8,11,14,17-hexaoxaeicosane;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=5.0         1992BEa (106681) 792
Medium: THF+CHCl3 (4:1 vol)
*************************************************************************
C38H48O9P2             L                        (7896)
1,21-Bis(diphenylphosphinyl)-2,5,8,11,14,17,20-heptaoxoheneeicozane;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        con non-aq 25°C       C        K1=4.6         1999TEa (106686) 793
In: tetrahydrofurane/CHCl3 4:1 v/v
*************************************************************************
C38H52N2O7             L                    CAS 101671-93-6  (5827)
Trimethoxyphenylcryptand 3,2,2.
36,37,38-Trimethoxy-5,10,15-trimethyl-22,25,30,33-tetraoxa-1,19-
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        nmr non-aq 25°C 100%  U        K1=7.26        1986CHc (106691) 794
CDCl3. L=36,37,38-trimethoxy-5,10,15-trimethyl-22,25,30,33-tetraoxa-1,19-dia
zapentacyclo[17.8.8.1(3,7).1(8,12).1(13,17)]octatriaconta-3,5,7,8...nonaene
*************************************************************************
C40H36O4P2             L                        (6805)
```

1,6-Bis(2-Diphenylphosphinylphenyl)-2,5-dioxahexane; (CH2.O.CH2.C6H4(PO(6H5)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=5.2 1993BEb (106734) 795
Medium: THF+CHCl3 4:1(vol)
****
C40H36O5P2 L CAS 86341-96-0 (5724)
1,7-Di(2-diphenylphosphinyl)phenyl-1,4,7-trioxaheptane;Ph2PO.C6H4.O.C2H4.O.C2H4.O.C6H4.POPh2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.6 1991EBa (106746) 796
Medium: THF+CHCl3 4:1(vol). Data also for 1,4,7,10-tetraoxa,1,4,7,10,13-pentaoxa and 1,4,7,10,13,16-hexaoxa and 4-tributyl analogues
****
C40H44O4P2 L (2074)
3,5-Di(t-butyl)-1,2-dihydroxybenzene bis(diphenylphosphinylmethyl)ether
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.72 1989KSa (106765) 797
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
****
C40H46O7 L CAS 177723-37-4 (8912)
25,27-Diethoxycalix[4]arenecrown-5, 1,3-alternate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 22°C 100% C M 1996CPa (106772) 798
K(LiA+L(org)=LiAL(org))=4.93
Medium: CHCl3 saturated with H2O. Method: extraction of LiA into CHCl3/L solution. HA is picric acid. For the cone conformation, K=4.74.
****
C40H46O8 L CAS 161282-95-7 (8680)
25,27-Dimethoxycalix[4]arene-crown-6;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=<=1 1995CUa (106777) 799
Medium: methanol, 0.01 M Et4NCl.
****
C40H48O8 L AN2DP(OEOEO)2E (2235)
3,4,5,6-Bis(3-methyl-5-(2-methoxy-5-methylbenzo))-2,7,10,13,16,19-hexaoxacyclodocosa-3,5-diene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U H 1979KLa (106795) 800

K(Li(picrate)+L)=5.01
Medium: CHCl3
****
C40H50N20O10 L CAS 143902-45-8 (8935)
Decamethylcucurbit[5]uril;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ cal mixed 25°C 50% C H K1=1.99 2000ZKb (106807) 801
Medium: 50% v/v formic acid/H2O. DH(K1)=-14.4 kJ mol-1, DS(K1)=-10 J K-1 mol-1.
****
C40H52N4O4 L CAS 205066-94-0 (8760)
Tetraphenyl-1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraethanol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ ISE non-aq 25°C 100% C K1=3.13 1998WLc (106823) 802
Medium: DMF, 0.05 M Et4NClO4.
Ligand is (all-R)-(all-alpha)-Tetraphenyl-
****
C40H52O14P2 L CAS 127832-94-4 (5740)
2,3:9,10:15,16:21-Tetrabenzo-1,24-di(diethoxyphosphinyl)-2,5,8,11,14,17,20,23-octaoxatetracosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.6 1989BEa (106828) 803
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C41H42O6 L CAS 151832-07-4 (6874)
9-(Dimethylethyl)-29,30,31,32,33-pentamethoxy-23-oxahexacyclotritriacontapentadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ dis non-aq 25°C 100% U 1993HSa (106871) 804
K(Li(picrate)+L)=9.38
Medium: CDCl3 saturated with D2O. With 23-thia- analogue K=7.96
****
C42H40O4P2 L (7153)
1,2-Bis(2-(2-(diphenylphosphinyl)ethyl)phenoxy)ethane

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ oth non-aq 25°C 100% U K1=5.2 1995TEa (106912) 805
Medium: THF:CHCl3 4:1 v/v. Li as 2,4-dinitrophenolate
****
C42H40O4P2 L (6809)
1,6-Bis(2-Diphenylphosphinylphenyl)-3,4-dimethyl-2,5-dioxahexane;

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=4.9         1993BEb (106917) 806
Medium: THF+CHCl3   4:1(vol)
********************************************************************************
C42H40O5P2              L                     CAS 163172-12-6  (2080)
Bis((2-diphenylphosphinylmethyl)phenyl)diethyleneglycol ether;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=5.3         1993BEb (106927) 807
Medium: THF+CHCl3   4:1(vol)
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=4.31        1989KSa (106928) 808
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
********************************************************************************
C42H40O7P2              L                     CAS 95651-36-8  (2079)
1,7-Di(2-(diphenylphosphinylmethoxy)phenyl)-1,4,7-trioxaheptane;
(Ph2PO.CH2.O.C6H4.O.C2H4)2O
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=3.65        1989KSa (106937) 809
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=3.65        1989TKb (106938) 810
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
********************************************************************************
C42H50O7                L                     CAS 177723-38-5  (8793)
1,3-Diisopropoxycalix[4]arene-crown-5, 1,3-alternate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        dis non-aq 22°C 100%  C    M                   1996CPa (106952) 811
                                          K(LiA+L(org)=LiAL(org))=4.78
Medium: CHCl3 saturated with H2O. Method: extraction of LiA into CHCl3/L
solution. HA is picric acid. For the cone conformation, K=4.70.
********************************************************************************
C42H68N2O4              L                     CAS 188593-77-3  (8954)
2,17-Didodecyl-6,7,9,10,12,13-hexahydro-dibenzo[b,f][1,8,11,14,4,5]tetraoxadiazacyc
lohexadecine
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        sp  non-aq  RT  100%  C        K1=4.0         2000GDa (106974) 812
Medium: acetonitrile.
********************************************************************************
C43H42O4P2              L                       (7156)
1,3-Bis((2-diphenylphosphinyl)phenoxy)propane;
```

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        oth non-aq 25°C 100%  U        K1=4.4         1995TEa (107000) 813
Medium: THF:CHCl3 4:1 v/v. Li as 2,4-dinitrophenolate. Also other         si
milar ligands
********************************************************************************
C43H42O6P2              L                          (5734)
1,7-Di((2-diphenylphosphynylmethoxy)phenyl-1,7-dioxaheptane;
(Ph2PO.CH2O.C6H4.O.C2H4)2CH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=3.46        1989TKb (107005) 814
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
********************************************************************************
C43H43NO4P2            HL                          (8538)
Methyl[bis-(2-diphenylphosphorylmethyl)phenoxyethyl]amine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        cal non-aq 25°C 100%  U   H    K1=4.56        1998SBb (107007) 815
Medium: MeCN  Calorimetric titration of LiNCS. DH(K1)=-17.5 kJ mol-1
********************************************************************************
C44H22N4O12Br8S4      H6L                      CAS 176173-80-1  (6959)
2,3,7,8,12,13,17,18-Octabromo-5,10,15,20-tetrakis(4-sulfonatophenyl)porphyrin;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        gl  NaNO3  25°C  0.1M C                        1996TNa (107039) 816
                                          K(Li+H2L=LiL+2H)=-18.81
********************************************************************************
C44H30N8Br8             L                          (7212)
2,3,7,8,12,13.17.18-Octabromo-5,10,15,20-tetrakis(N-methylpyridinium-4-yl)porphin(+
+++);
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        sp  NaNO3  25°C  0.1M C        K1=4.21         1998TNa (107086) 817
                                          K(Li+HL=LiL+H)=-8.80
--------------------------------------------------------------------------------
Li+        sp  oth/un 25°C 0.10M C                       1996RHb (107087) 818
                                          K1eff=2.98
********************************************************************************
C44H36O4P2              L                          (6810)
1,2-Bis(2-Diphenylphosphinylphenylmethoxy)benzene; C6H4(OCH2.C6H4(PO(C6H5)2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=4.3         1993BEb (107091) 819
```

Medium: THF+CHCl3 4:1(vol)
****
C44H38N8 H2L CAS 48242-70-2 (6629)
5,10,15,20-Tetrakis(1-methylpyridinium-4-yl)porphine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp NaNO3 25°C 0.50M C K1=2.58 1998IHb (107106) 820
For the 2-pyridyl analogue, K1=3.28
****
C44H42O6P2 L (6806)
1,12-Bis(2-Diphenylphosphinylphenyl)-2,5,8,11-tetraoxadodecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=5.2 1993BEb (107110) 821
Medium: THF+CHCl3 4:1(vol)
****
C44H44O5P2 L (5735)
1,7-Di((2-diphenylphosphinylmethoxy)phenyl)-4-oxaheptane; (Ph2PO.CH2O.C6H4.C3H6)2O

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.18 1989TKb (107114) 822
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C44H44O5P2 L (5733)
1,7-Di(2-(diphenylphosphynylethyl)phenyl)-1,4,7-trioxaheptane;
(Ph2PO.C2H2.C6H4.OC2H4)2O

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ oth non-aq 25°C 100% U K1=4.6 1995TEa (107119) 823
Medium: THF:CHCl3 4:1 v/v. Li as 2,4-dinitrophenolate

Li+ con non-aq 25°C 100% U K1=4.05 1989TKb (107120) 824
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
****
C44H44O6P2 L CAS 126763-09-5 (7790)
1,8-Bis[2-(diphenylphosphinylmethyl)phenoxy]-3,6-dioxaoctane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ cal non-aq 25°C 100% U H K1=4.90 1998SBb (107128) 825
Medium: MeCN Calorimetric titration of LiNCS. DH(K1)=-25.2 kJ mol-1
****
C44H50N2O10 H2L CAS 329183-28-0 (8807)
25,27-Bis(carboxymethoxy)-26,28-bis[(N,N-diethylaminocarbonyl)methoxy]calix[4]arene
;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        gl  non-aq 25°C 100%  C        K1=4.28        2000ABb (107144) 826
                                         B(Li2L)=7.11
Medium: MeOH, 0.05 M Et4NClO4.
*************************************************************************
C44H52N4O8              L                     CAS 246035-33-6  (2925)
25,27-Bis(N,N-diethylaminocarbonylmethoxy)-26,28-bis(aminocarbonylmethoxy)calix[4]a
rene;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  C        K1=<1          1999USa (107159) 827
Medium: MeOH, 0.10 M Et4NCl
*************************************************************************
C44H52O10               L                     CAS 163317-54-2  (9089)
1,3-Calix[4]-bis-crown-5;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  C  I     K1=1.80        1996AAe (107165) 828
Medium: acetonitrile. In 100% MeOH, K1<=1.
*************************************************************************
C44H54O8                L                     CAS 161282-98-0  (8679)
25,27-Bis(1-proplyoxy)calix[4]arene-crown-6, 1,3-alternate;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  C        K1=<=1         1995CUa (107176) 829
Medium: methanol, 0.01 M Et4NCl.
*************************************************************************
C44H54O8                L                     CAS 161282-96-8  (8678)
25,27-Bis(2-proplyoxy)calix[4]arene-crown-6, 1,3-alternate;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  C        K1=<=1         1995CUa (107182) 830
Medium: methanol, 0.01 M Et4NCl.
*************************************************************************
C44H56O4             H4L                     (7294)
4-Tert-butyl-calix[4]arene;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        sp  non-aq 25°C 100%  U        K1=2.9         1996ABa (107187) 831
                                         B(Li2L)=4.04
Medium: MeCN
*************************************************************************
C45H39O3P3              L                     CAS 73218-92-5  (5679)
1,3,5-Tris(diphenylphosphinylmethyl)-benzene; C6H3(CH2.PO(C6H5)2)3
```

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=5.1 1984YKa (107213) 832
Medium: tetrahydrofuran + CHCl3 4:1, Li as 2,4-dinitrophenolate
****
C45H48NO6P3 L (7953)
Tris[2-(diphenylphosphorylmethoxy)ethyl]amine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ cal non-aq 25°C 100% U H K1=4.08 1998SBb (107219) 833
Medium: MeCN Calorimetric titration of LiNCS. DH(K1)=-28.1 kJ mol-1
****
C45H48N3O3P3 L CAS 90179-28-5 (5682)
N,N',N"-tris(Diphenylphosphinylmethyl)-1,4,7-triazacyclononane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=5.6 1984YKa (107226) 834
Medium: tetrahydrofuran + CHCl3 4:1, Li as 2,4-dinitrophenolate
****
C46H40O6P2 L (6814)
1,2-Bis((2-(2-diphenylphosphinyl)phenoxy)ethoxy)benzene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=7.0 1991EBa (107241) 835
Solvent : Tetrahydrofurane + CHCl3 4:1(vol);
****
C46H46N2O4 L CAS 185118-12-1 (7824)
N,N'-Bis(1-pyrenylmethyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp mixed 25°C 90% C 1997KKa (107250) 836
K(LiSCN+L)=0.48
Method: fluorescence emission. Medium: MeOH/CHCl3 (9:1 v/v).
****
C46H46O7P2 L (6807)
1,15-Bis(2-Diphenylphosphinylphenyl)-2,5,8,11,14-pentaoxapentadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.9 1993BEb (107260) 837
Medium: THF+CHCl3 4:1(vol)
****
C46H48O6P2 L (7155)
1,8-Bis(2-(2-(diphenylphosphinyl)ethyl)phenoxy)-3,6-dioxyoctane
---

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        oth non-aq 25°C 100%  U        K1=4.6         1995TEa (107271) 838
Medium: THF:CHCl3 4:1 v/v. Li as 2,4-dinitrophenolate. Also other         si
milar ligands
*************************************************************************
C46H48O9P2              L                      CAS 95651-38-0  (2082)
1,5-Bis(2-(2-(diphenylphosphinylmethoxy)ethoxy)phenoxy)-3-oxapentane;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=4.18        1989KSa (107280) 839
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
*************************************************************************
C48H44O8P2              L                      CAS 95651-37-9  (2081)
1,2-Bis(2-(2-(diphenylphosphinylmethoxy)phenoxy)ethoxy)benzol;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=3.75        1989KSa (107361) 840
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
*************************************************************************
C48H50O8P2              L                        (6808)
1,18-Bis(2-Diphenylphosphinylphenyl)-2,5,8,11,14,17-hexaoxananodecane;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        con non-aq 25°C 100%  U        K1=4.6         1993BEb (107365) 841
Medium: THF+CHCl3   4:1(vol)
*************************************************************************
C48H54NO6P3             L                        (7975)
Tris(3-oxa-5-(diphenylphosphoryl)pentyl]amine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        cal non-aq 25°C 100%  U   H    K1=4.16        1998SBb (107376) 842
                                       B(Li2L)=6.04
                                       B(Li3L)=9.99
Medium: MeCN  Calorimetric titration of LiNCS. DH(K1)=-32.8 kJ mol-1
DH(Li2L)=-68.4, DH(Li3L)=-46.7
*************************************************************************
C48H54N6O8              L                      CAS 449738-94-7  (8791)
1,7-Dioxa-4,10-diazacyclododecane-4,10-bis[methylene-8-(1,3,3-trimethyl-6-nitro-spi
robenzopyran)]
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Li+        sp  alc/w  25°C 100%  C        K1=6.62        2002NFa (107384) 843
Medium: 100% MeOH. Method: electrospray ionization mass spectrometry.
*************************************************************************
```

C48H54O10P4 L CAS 97910-30-0 (2084)
Tris((2-(diphenylphosphinylmethoxy)ethoxy)methyl)phosphine oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=4.45 1989KSa (107388) 844
Medium: tetrahydrofuran/CHCl3 4:1 (vol)
****
C48H60O8 H2L R-Bu-Calixarene CAS 147513-53-9 (6705)
4-tert-Butylcalix[4]arenedicarboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 100% C K1=4.5 1993ABb (107403) 845
B(Li2L)=7.6
B(LiHL)=12.4
Medium: MeOH, 0.01 M Et4NClO4. Data also for di-tert-butyl ester
****
C48H60O12 L CAS 157769-14-7 (9090)
1,3-Calix[4]-bis-crown-6;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C I K1=2.3 1996AAe (107411) 846
Medium: acetonitrile. In 100% MeOH, K1<=1.
****
C48H64O4 L CAS 105880-81-7 (8677)
tert-Butylcalix-4-arene tetramethyl ether;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=5.10 2004BCb (107421) 847
Medium: acetonitrile, 0.01 M Et4NClO4.
****
C52H62N6O10 ; L CAS 190781-91-0 (8792)
1,4,10,13-Tetraoxa-7,16-diazacyclododecane-7,16-bis[methylene-8-(trimethyl-6-nitro-
spirobenzopyra

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w 25°C 100% C K1=6.85 2002NFa (107480) 848
Medium: 100% MeOH. Method: electrospray ionization mass spectrometry.
****
C52H64O12 H4L R-Bu-Calixarene CAS 113215-72-8 (6704)
5,11,17,23-Tetra-(t-butyl)-25,26,27,28-tetrakis[(hydroxycarbonyl)methoxy]calix[4]ar
ene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl alc/w 25°C 100% C K1=7.89 1993ABb (107491) 849

B(LiHL)=18.93
B(LiH2L)=27.98
B(LiH3L)=35.68

In methanol; 0.01 M (CH3CH2)4NClO4

****

C52H68N4O8 CAS 150588-24-2 (3074)
25,26,27,28-Tetrakis-(N,N-diethylaminocarbonylmethoxy)calix[4]arene; L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	25°C	100%	C	H	K1=3.0	1999USa (107499)	850

Medium: MeOH, 0.10 M Et4NCl. By calorimetry: DH(K1)=-1 kJ mol-1

****

C52H68N4O8 L (4823)
25,27-Bis(N,N-diethylaminocarbonylmethoxy)-26,28-bis(N-butylaminocarbonylmethoxy)calix[4]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	25°C	100%	C		K1=<1	1999USa (107508)	851

Medium: MeOH, 0.10 M Et4NCl

****

C52H72O6 L (9263)
5,11,17,23-Tetra(t-butyl)-25,27-dimethoxy-26,28-dimethoxyethoxycalix[4]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	mixed	25°C	100%	C		K1=5.41	2004BCb (107526)	852

Medium: acetonitrile, 0.01 M Et4NClO4.

****

C54H74O7 L (7302)
25,27-Dimethoxy-4-tert-butylcalix[4]arene-crown-5;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	non-aq	22°C	100%	U		K1=4.53	1996SCa (107542)	853

Medium: CHCl3 saturated with H2O

Data also for other substituted t-butylcalix[4]arene-crown-5 analogues

****

C54H90N6O18 L Valinomycin CAS 2001-95-8 (2142)
Valinomycin, Potassium Ionophore

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	non-aq	22°C	100%	C	M	K(LiA+L(org)=LiAL(org))=5.83	1996CPa (107554)	854

Medium: CHCl3 saturated with H2O. Method: extraction of LiA into CHCl3/L solution. HA is picric acid.

****

C56H60O12 L CAS 157769-17-0 (9091)

1,3-Calix[4]-bis-benzo-crown-6;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	25°C	100%	C		K1=1.5	1996AAe (107578)	855

Medium: acetonitrile.

****

C56H64O10 L CAS 405108-40-9 (8249)
1,2-Di-O-[2-(2-benzyloxyethoxy)ethyl]-3,4,5,6-tetra-O-benzyl-myo-inositol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	dis	non-aq	25°C	100%	C		K(Li.pic+L(org)=LiL.pic)=2.19	2001SSb (107587)	856

Distribution of picrate salt into CHCl3/HL.
K: Li.pic(aq)+L(org)=LiL.pic(org). Data for series of myo-inositol ligands

****

C56H72O8 L CAS 123311-74-0 (6160)
Tetramethyl-t-butylcalix[4]arenetetraketone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	alc/w	25°C	100%	U	I	K1=2.7	1989ACb (107598)	857

Medium: MeOH. In CH3CN, K1=5.8

****

C56H72O12 L (8751)
Tetramethyl-4-t-Butylcalix[4]arenetetraethanoate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	EMF	non-aq	25°C	100%	C	IH	K1=5.61	1995DGa (107602)	858

Medium: acetonitrile, 0.05 M Et4NClO4. In benzonitrile, K1=5.63.
Competitive method: Ag/Ag+ electrode. DH(K1)=-37.80, DS=-19.4.

****

C56H78O8 L CAS 122356-76-7 (8681)
Tetra-tert-butyl-1,3-dimethoxycalix[4]arene-crown-6;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	25°C	100%	C		K1=<=1	1995CUa (107607)	859

Medium: methanol, 0.01 M Et4NCl.

****

C56H80O8 L (9259)
5,11,17,23-Tetra(t-butyl)-25,26,27,28-tetramethoxyethoxycalix[4]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	25°C	100%	C	H	B2=9.23	2004BCb (107614)	860

Medium: acetonitrile, 0.01 M Et4NClO4. By calorimetry: DH(B2)=-28.3 kJ mol-1, DS(B2)=81.7 J K-1 mol-1.

****
C58H78O11 HL CAS 465527-74-6 (9287)
7,13,19,25-Tetra-t-butyl-28-methoxy-27,29,30-triethylacetate-2,3-dihomo-3-oxacalix[4]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	sp	alc/w	25°C	100%	C		K1=2.6		2001MAa (107623)	861

Medium: MeOH, 0.01 M Et4NCl.
****
C58H80O10 L (9264)
5,11,17,23-Tetra-t-butyl-25,27-di(2-methoxyethoxy)-26,28-di(ethylacetate)calix[4]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Li+	sp	non-aq	25°C	100%	C	H	K1=5.99	B2=10.72	2004BCb (107632)	862

Medium: acetonitrile, 0.01 M Et4NClO4. DH(K1)=-33.8 kJ mol-1,
DS(K1)=1.0 J K-1 mol-1; DH(B2)=-19.0, DS(B2)=141.1.
****
C60H54NO6P3 L (8067)
Tris[2-diphenylphosphoryl)phenoxyethyl]amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	cal	non-aq	25°C	100%	U	H	K1=4.30	1998SBb (107639)	863
							B(Li2L)=6.35		
							B(Li3L)=8.22		

Medium: MeCN Calorimetric titration of LiNCS. DH(K1)=-10.7 kJ mol-1
DH(Li2L)=-16.6, DH(Li3L)=-19.3
****
C60H72O4 L (9260)
5,11,17,23-Tetra(t-butyl)-25,27-dimethoxy-26,28-diphenylmethoxycalix[4]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	25°C	100%	C		K1=3.54	2004BCb (107643)	864

Medium: acetonitrile, 0.01 M Et4NClO4.
****
C60H80O12 L CAS 97600-39-0 (6158)
Tetraethyl-4-t-butylcalix[4]arenetetraethanoate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	con	non-aq	25°C	100%	C	H	K1=6.25	2002ASc (107652)	865

Medium: acetonitrile. DH(K1)=-45.83 kJ mol-1, DS(K1)=-42.36 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	EMF	non-aq	25°C	100%	C	I	K1=6.20	1995DGa (107653)	866

Medium: acetonitrile, 0.05 M Et4NClO4. Competitive method: Ag/Ag+
electrode. Also data for solvent benzonitrile and for tetrabutyl deriv.

Li+ sp alc/w 25°C 100% U I K1=2.6 1989ACb (107654) 867
Medium: MeOH. In CH3CN, K1=6.4
****
C60H82N2O10 L CAS 155377-20-1 (8806)
5,11,17,23-Tetra-butyl-25,27-bis(carboxymethoxy)-bis[(N,N-diethylaminocarbonyl)meth
oxy]calix[4]ar

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ gl non-aq 25°C 100% C K1=4.32 2000ABb (107667) 868
Medium: MeOH, 0.05 M Et4NClO4.
****
C60H84N4O8 L CAS 246035-32-5 (2735)
25,27-Bis(N,N-diethylaminocarbonylmethoxy)-26,28-bis(aminocarbonylmethoxy)-t-butylc
alix[4]arene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=<1 1999USa (107680) 869
Medium: MeOH, 0.10 M Et4NCl
****
C62H78N2O4S2 L (8158)
5,11,17,23-Tetrakis(1,1-dimethylethyl)-25,27-bis(2-methylthioethoxy)....calix(4)are
ne;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ cal non-aq 25°C 100% U H K1=5.42 2002NRa (107686) 870
Method: microcalorimetry. Medium: MeCN.. DH(K1)=-26.2 kJ mol-1
In benzonitrile K1=5.88, DH=-37.6
****
C62H84O14 L CAS 135581-11-2 (8630)
9,23-Dioxpentacyclo[23.3.1.13,7.111.15.117.21]dotriacontane, ethanoic acid
derivative;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=3.2 1991ACc (107695) 871
Medium: acetonitrile, 0.01 M Et4NClO4.
****
C63H60NO6P3 L (8437)
Tris[2-(diphenylphosphorylmethyl)phenoxyethyl]amine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ cal non-aq 25°C 100% U H K1=3.48 1998SBb (107720) 872
B(Li2L)=4.56
B(Li3L)=7.60
Medium: MeCN Calorimetric titration of LiNCS. DH(K1)=-20.2 kJ mol-1

DH(Li2L)=-40.7, DH(Li3L)=-27.1
****
C64H60O12 L CAS 211870-40-5 (4258)
Calix[4]arene-bis(dibenzo)crown-6;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=2.18 1999LDa (107735) 873
Medium: acetonitrile, 0.01 M Et4NClO4.
****
C64H62O6P4 L (6813)
1,2-Bis(4,5-di(diphenylphosphinyl)-pent-1-oxy)benzene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=6.0 1990EAb (107740) 874
Medium: THF+CHCl3 4:1(vol). Metal as 2,4-dinitrophenolate
****
C64H64O12 L CAS 162898-44-4 (9092)
1,3-Calix[4]-bis-naphtho-crown-6;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=1.2 1996AAe (107745) 875
Medium: acetonitrile.
****
C64H72N4O4P4 L CAS 104786-07-4 (2065)
1,4,7,10-Tetra(diphenylphosphinylethyl)-1,4,7,10-tetraazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=5.91 1986STb (107753) 876
Medium: THF:CHCl3 4:1 v/v. M as 2,4-dinitrophenolate
****
C64H80O6 L (9262)
5,11,17,23-Tetra-t-butyl-25,27-di(phenylmethoxy)-26,28-di(2-methoxyethoxy)-calix[4]
arene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C H K1=3.76 B2= 7.88 2004BCb (107762) 877
Medium: acetonitrile, 0.01 M Et4NClO4. DH(K1)=-30.5 kJ mol-1
DS(K1)=-30.6 J K-1 mol-1; DH(B2)=-20.0, DS(B2)=83.6.
****
C64H86O7 L CAS 182684-17-9 (7455)
4-tert-Butylcalix[5]crown-4 trimethylester;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w 25°C 100% U K1=1.5 1996AAc (107769) 878

Medium MeOH, 0.1M Et4NCl. Data also for the crown-5 and crown-6 analogues
****
C66H80O8 L (9261)
5,11,17,23-Tetra(t-butyl)-25,27-diethoxycarbonylmethoxy-26,28-diphenylmethoxycalix[4]arene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=4.30 2004BCb (107777) 879
Medium: acetonitrile, 0.01 M Et4NClO4.
****
C68H76N4O4 L CAS 123207-92-1 (7812)
5,11,17,23-Tetra-t-butyl-[25,26,27,28-tetrakis(2-pyridylmethyl)oxy]calix(4)arene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ EMF non-aq 25°C 100% C IH K1=5.95 1999DCa (107785) 880
Medium: acetonitrile, 0.05 M Bu4NClO4. Method: by competition with Ag+.
By calorimetry: K1=5.95, DH(K1)=-23.91 kJ mol-1, DS(K1)=33.7 J K-1 mol-1.
****
C68H92N4O8 L CAS 133801-01-1 (7184)
4-tert-Butylcalix[4]arene tetrapyrrolidinylamide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ cal alc/w 25°C 100% U H 1995ABc (107791) 881
Medium: 100% Methanol. DH(K1)=6 kJ mol-1, DS(K1)=77 J K-1 mol-1.
****
C68H96O8 L (6161)
Tetra-t-butyl-4-t-butylcalix[4]arenetetraketone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w 25°C 100% U K1=1.8 1989ACb (107795) 882
Medium: MeOH, 0.1 M Et4NCl
****
C68H100N4O8 L CAS 246035-35-8 (3034)
25,27-Bis(N,N-diethylaminocarbonylmethoxy)-26,28-bis(N-butylaminocarbonylmethoxy)-t-butylcalix[4]

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% C K1=<1 1999USa (107805) 883
Medium: MeOH, 0.10 M Et4NCl
****
C68H100N4O8 L CAS 114155-16-7 (7183)
4-tert-Butylcalix[4]arene tetradiethylacetamide;

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

Li+ cal alc/w 25°C 100% U IH 1995ABc (107815) 884
Medium: 100% Methanol. DH(K1)=-7 kJ mol-1, DS(K1)=50 J K-1 mol-1.
In acetonitrile, K1>8.5, DH(K1)=-55 kJ mol-1, DS(K1)=-22 J K-1 mol-1.

Li+ dis non-aq 20°C 100% C M 1988AGa (107816) 885
K(Li+A+L(org)=LiAL(org))=7.11
Method: extraction of metal picrate into CHCl3/L solution. HA is picric acid.
****
C69H102N4O9 L CAS 116352-85-3 (9286)
para-t-Butyldihomooxacalix[4]arene tetra(diethyl)amide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w 25°C 100% C K1=3.81 2004MFa (107835) 886
Medium: MeOH, 0.01 M Et4NCl.
****
C72H68O10P4 L CAS 88928-02-3 (5680)
Tetrakis-4',5',4",5"-(diphenylphosphinylmethyl)-2,3:11,12-dibenzo-18-crown-6;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ con non-aq 25°C 100% U K1=3.09 1985YKa (107847) 887
Medium: EtOH+CHCl3 1:1; M is used in nitrophenolate form
****
C75H100O15 L CAS 152495-34-6 (7033)
Penta-tert-butylpentakis(ethoxycarbonylmethyloxy)calix[5]arene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w 25°C 100% U K1=1.0 1993BMa (107860) 888
Medium: MeOH, 0.1 M Et4NCl.
****
C76H80O8 L (6162)
5,11,17,23-Tetra-t-butyl-25,26,27,28-tetra(benzoyl)methoxycalix[4]arene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp non-aq 25°C 100% U K1=6.3 1989ACb (107870) 889
Medium: CH3CN
****
C77H82O9 L CAS 253317-20-3 (9288)
p-Tert-butyldihomooxacalix[4]arene tetraphenyketone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Li+ sp alc/w 25°C 100% C I K1=2.3 1999MAb (107894) 890
Medium: MeOH, 0.01 M Et4NCl. In acetonitrile, K1=3.6.
****
C78H90O10P2 L CAS 160638-26-6 (9130)

5,11,17,23-Tetra-t-butyl-bis(diethylcarbamoylmethoxy)-bis(diphenylphosphinoylmethoxy)calix[4]aren

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	alc/w	20°C	100%	C		K1=2.88	2003YVa (107900)	891

Medium: 100% EtOH, 0.01 M Et4NBr. Ligand is cone isomer. For paco isomer, K=2.64. Also data for bis(diethyl ester) analogues.

****

C85H120O15 L CAS 152495-35-7 (7034)
Penta-tert-butylpentakis(tert-butoxycarbonylmethoxy)calix[5]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	alc/w	25°C	100%	U		K1=1.5	1993BMa (107917)	892

Medium: MeOH, 0.1 M Et4NCl.

****

C90H120O18 L CAS 92003-62-8 (6159)
Hexaethyl-4-t-butylcalix[6]arenehexaethanoate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	cal	non-aq	25°C	100%	C		K1=4.37	1997DZa (107942)	893

Medium: benzonitrile. DH(K1)=-21.04 kJ mol-1, DS(K1)=13.1 J K-1 mol-1.

Li+	sp	non-aq	25°C	100%	U	I	K1=3.7	1989ACb (107943)	894

Medium: CH3CN

****

C90H130O15 L CAS 269057-78-5 (3334)
5,11,17,23,29-Penta-tert-octylcalix[5]arene-31,32,33,34,35-pentaethanoate pentamethyl ester;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	sp	non-aq	25°C	100%	C	I	K1=2.28	2000AAa (107951)	895

Medium: methanol, 0.01 M Et4NCl. Also data for acetonitrile, 0.01 M Et4NCl and for the pentaethyl ester.

****

Polymer H2L X-14885A (4547)
Antibiotic X14885A, calcium ionophore

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Li+	gl	alc/w	25°C	100%	U		K1=4.1	1989ABb (108076)	896

Medium: MeOH

****

Polymer (4181)
Phosphatidic acid;

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

```
-------------------------------------------------------------------------------
Li+        gl  oth/un 24°C 0.10M U        K1=1.3         1966AKa (108271) 897
*******************************************************************************
Polymer                                          (4192)
Polyacrylic acid and 7.5% divinylbenzene copolymer
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        gl  oth/un 25°C  0.2M U        K1=0.29        1957GFa (108304) 898
*******************************************************************************
Polymer                HL                        (3531)
Polyacrylic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Li+        gl  oth/un 25?°C 0.20M U                        1957GFa (108323) 899
                                        K'=0.28
Medium: LiCl. See reference for definitions
```

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EXPLANATORY NOTES

DATA Flags are :-

T Data at other TEMPERATURES
I Data with various BACKGROUNDS

H Data for THERMOCHEMICAL quantities
M Data for TERNARY Complexes

EVALUATION Flags are :-

T or IUP=T signifies EVALUATION RATING = Tentative by IUPAC
R or IUP=R signifies EVALUATION RATING = Recommended by IUPAC

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