SC-Database
Software version = 5.81  Data version = 4.62
Experiment list contains 598 experiments for
 (no ligands specified)
 Metal : Rb+
 (no references specified)
 (no experimental details specified)

**********

e-  HL  Electron  (442)
Electron;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | KCl | 25°C | 0.0 | C | I | K(Rb+e=Rb(Hg))=-37.03(-2.190V) | 1997BMa (866) | 1 |

Method: Rb(Hg) amalgam electrode. Data for 0-0.8 mass fraction MeOH/H2O, 0.05-2.0 m RbCl. K=-36.31 (E=-2.1482 V, x=0.2); K=-35.67 (-2.1104, x=0.4).

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | mixed | 25°C | 10% | U | I | K(Rb+e=Rb(s))=-49.26(-2.914V) | 1974DKb (867) | 2 |

Medium: 10% w/w DMSO/H2O; K=-49.06(-2.902V,w=20), -48.48(-2.868V,w=40), -47.6(-2.816V,w=60)

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | none | 25°C | 0.00 | U | T | K(Rb+e)=-33.300(-1.96994V) | 1974LMc (868) | 3 |

K: Rb+e=Rb(Hg); x(Rb) to 0; K=-34.593(-1.94347V,10 C); -32.139(-1.99691,40C) -31.064(-2.02257V,55 C); -30.094(-2.0490V, 70 C)

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | oth/un | 25°C | 0.0 | U | I | K(Rb+e=Rb(s))=-49.41 (-2923mV) | 1972COa (869) | 4 |

Method:Estimated. MeOH: -54.09((-3.200V).EtOH: -52.99((-3.135V).BuOH: -48.23 (-2.853V),:PentOH: -51.54(-3.049V).Me2CO: -49.33(-2.918V) ...Cont'd

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | oth/un | 25°C | 0.0 | U | I | K(Rb+e=Rb(s))=-49.41 (-2923mV) | 1972COa (870) | 5 |

Method: Estimated. MeCN: -57.76((-3.417V).HCOOH: -61.80(-3.656V).
Also NH3 and N2H4

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | none | 25°C | 0.00 | U | | K(Rb+e=Rb(Hg))=-31.44(-1.860V) | 1970KGa (871) | 6 |

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | alc/w | 25°C | 100% | U | | K(Rb+e)=-49.23(-2912 mV) | 1958BSb (872) | 7 |

Medium: MeOH

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | non-aq | 25°C | 100% | U | T | K(Rb+e=Rb(s))=-48.26(-2.855V) | 1954PSa (873) | 8 |

Medium: formamide; K=-49.35(-2.851,18 C)(M units)

Rb+ EMF none 25°C 0.0 U 1923LRa (874) 9
K(Rb+e)=-49.45(-2924.2 mV)
**********
BF4- HL (2497)
Tetrafluoroborate;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con non-aq 25°C 100% U K1=1.8 1975YKa (1202) 10
Medium: MeCN
**********
BO4H4- HL Borate CAS 10043-35-3 (991)
Borate; B(OH)4-
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp oth/un 25°C 1.00M U I K1=0.56 1990RAa (1326) 11
Medium: RbCl. Data at I=0 M and pressures to 2041 atmos.
**********
Br- HL Bromide CAS 10035-10-6 (19)
Bromide;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con non-aq 25°C 100% U T K1=2.52 1993TAa (2283) 12
Medium: 2-methoxyethanol, -10 to 80 C
---
Rb+ con diox/w 25°C 29% U I K1=1.88 1971SAd (2284) 13
Medium: 29.3% w/w dioxan/MeOH. K1=1.23(0%), 2.54(45.2%), 2.82(52.6%),
3.78(62.3%)
---
Rb+ con non-aq 25°C 100% U K1=0.03 1970CDa (2285) 14
Medium: DMSO
**********
BrO3- HL Bromate (6017)
Bromate;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con none 25°C 0.0 U K1=-0.24 1971JBa (2429) 15
---
Rb+ con none 25°C 0.0 U K1=-0.22 1969BJa (2430) 16
**********
C6N6Fe---- H4L (2191)
Hexacyanoferrate (II); Fe(II)(CN)6----
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ EMF oth/un 25°C U K1=2.51 1969NSa (3603) 17
Assuming K(Rb+Fe(CN)6)=1.30

---
Rb+ oth none 25°C 0.0 U K1=2.54 1966NSa (3604) 18
Method: transport number. K1=2.42 to 2.65
**********
C6N6Fe--- H3L Ferricyanide (2491)
Hexacyanoferrate (III); Fe(III)(CN)6---
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ oth oth/un 25°C 0.00 U K1=0.4 1967RMa (3685) 19
Method: estimated from literature data
**********
C8N8W-- H2L (2192)
Octacyanotungstate (VI); W(VI)(CN)8--
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con oth/un 25°C 0.00 U K1=1.57 1976LLa (3705) 20
**********
Cl- HL Chloride CAS 7647-01-0 (50)
Chloride;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con mixed 20°C 89% U K1=3.27 1973YKa (5600) 21
Medium: 89% w/w butanol/H2O
---
Rb+ con none 25°C 0.0 U K1=-0.6 1972DJb (5601) 22
---
Rb+ con non-aq 25°C 100% U K1=0.04 1971PGa (5602) 23
Medium: N-methylformamide
---
Rb+ con non-aq 25°C 100% U I K1=1.92 1971SAd (5603) 24
Medium: 29.3% w/w dioxan/MeOH. K1=1.37(0%), 2.59(45.2%), 3.00(52.6% ),
3.86(62.3%)
---
Rb+ con non-aq 25°C 100% U K1=0.42 1970CDa (5604) 25
Medium: DMSO
---
Rb+ con non-aq 25°C 100% U I K1=1.20 1970SAf (5605) 26
Medium: 9.57% w/w butanol/MeOH. K1=1.25(19.7%), 1.43(39.8%), 1.53(51.4%)
---
Rb+ oth oth/un 25?°C 0.0 M K1=-0.3 1966MBb (5606) 27
---
Rb+ gl diox/w 25°C 70% U K1=2.59 1963PGb (5607) 28
---
Rb+ con none 18°C 0.0 U K1=-0.77 1927DAb (5608) 29
**********
ClO3- HL Chlorate CAS 7790-93-4 (971)
Chlorate;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | none | 25°C | 0.0 | C | I | K1=-0.12 | 1986SDa (6057) | 30 |

Value derived from data for 0.001-0.05 self medium.

| Rb+ | con | none | 25°C | 0.0 | U | | K1=-0.10 | 1972DDa (6058) | 31 |
|---|---|---|---|---|---|---|---|---|---|

**********

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

Perchlorate;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | none | 25°C | 0.0 | C | I | K1=0.18 | 1986SDa (6358) | 32 |

Value derived from data for 0.001-0.05 self medium.

| Rb+ | gl | non-aq | 25°C | 100% | U | H | K1=6.17 | 1981TMb (6359) | 33 |
|---|---|---|---|---|---|---|---|---|---|

Medium: Glacial acetic acid. Alternative method: Spectrophotometry.
DH(K1)=-23 kJ mol-1

| Rb+ | con | non-aq | 25°C | 100% | U | | K1=1.50 | 1978CAa (6360) | 34 |
|---|---|---|---|---|---|---|---|---|---|

Medium: Acetonitrile

| Rb+ | con | non-aq | 25°C | 100% | U | I | K1=0.26 | 1976RMb (6361) | 35 |
|---|---|---|---|---|---|---|---|---|---|

Medium: 1,3-Dimethylethyleneurea. In 1,3-Dimethylpropyleneurea K1=0.39

| Rb+ | con | non-aq | 25°C | 100% | U | | K1=1.5 | 1975YKa (6362) | 36 |
|---|---|---|---|---|---|---|---|---|---|

Medium: MeCN

| Rb+ | con | non-aq | 25°C | 100% | U | | K1=1.03 | 1974HPb (6363) | 37 |
|---|---|---|---|---|---|---|---|---|---|

Medium: hexamethylphosphotriamide. K1 by Pitts eqn. By Fuoss-Hsia: K1=1.28

| Rb+ | con | non-aq | 25°C | 100% | U | | K1=0.05 | 1973JYa (6364) | 38 |
|---|---|---|---|---|---|---|---|---|---|

Medium: propene carbonate;0 corr. K1=-0.05 to 0.15

| Rb+ | con | alc/w | 25°C | 100% | U | | K1=1.65 | 1972DAa (6365) | 39 |
|---|---|---|---|---|---|---|---|---|---|

Medium:MeOH

| Rb+ | con | non-aq | 25°C | 100% | U | | K1=0.86 | 1971BCa (6366) | 40 |
|---|---|---|---|---|---|---|---|---|---|

Medium: tetramethylurea

| Rb+ | con | none | 25°C | 0.0 | U | | K1=0.13 | 1971DAa (6367) | 41 |
|---|---|---|---|---|---|---|---|---|---|

| Rb+ | con | non-aq | 25°C | 100% | U | | K1=0.48 | 1971PGa (6368) | 42 |
|---|---|---|---|---|---|---|---|---|---|

Medium: N-methylformamide

| Rb+ | sol | none | 25°C | 0.0 | U | | | 1969GUb (6369) | 43 |
|---|---|---|---|---|---|---|---|---|---|

Kso=-2.54

| Rb+ | con | non-aq | 25°C | 100% | U | | K1=1.28 | 1967KHe (6370) | 44 |
|---|---|---|---|---|---|---|---|---|---|

Medium: MeCN

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Rb+ con non-aq 25°C 100% U T K1=1.71 1966MWb (6371) 45
Medium: MeCN, also at 20 C, 30 C

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Rb+ con non-aq 25°C 100% U K1=2.02 1962MWa (6372) 46
yedium: MeCN

**********

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

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | oth/un | 25°C | 1.0M | U | I | K1=-0.07 | 1993MAa (7136) | 47 |

K1 values over a range of pressures and ionic strengths

**********

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

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=0.31 | 1976RMb (8345) | 48 |

Medium: 1,3-dimethy;-2-imidazolidinone

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| Rb+ | con | non-aq | 25°C | 100% | U | | K1=2.32 | 1972IWa (8346) | 49 |
|---|---|---|---|---|---|---|---|---|---|

Medium: acetone

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| Rb+ | con | alc/w | 25°C | 93.7M | U | | K1=1.54 | 1971BPa (8347) | 50 |
|---|---|---|---|---|---|---|---|---|---|

Medium: 93.7% w/w EtOH/H2O

---

| Rb+ | con | non-aq | 25°C | 100% | U | | K1=2.63 | 1971HNb (8348) | 51 |
|---|---|---|---|---|---|---|---|---|---|

Medium: propanol

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| Rb+ | con | alc/w | 25°C | 100% | U | I | K1=0.78 | 1970BWc (8349) | 52 |
|---|---|---|---|---|---|---|---|---|---|

Medium: MeOH; K1=1.80 in EtOH

---

| Rb+ | con | non-aq | 25°C | 100% | U | | K1=-0.13 | 1970CDa (8350) | 53 |
|---|---|---|---|---|---|---|---|---|---|

Medium: DMSO

---

| Rb+ | oth | non-aq | 18°C | 100% | U | | K1=0.64 | 1967CGa (8351) | 54 |
|---|---|---|---|---|---|---|---|---|---|

Method:freezing point. Medium: DMSO. m units

---

| Rb+ | con | oth/un | 25°C | 0.0 | U | I | K1=0.04 | 1964FFb (8352) | 55 |
|---|---|---|---|---|---|---|---|---|---|

also K1 for dioxan-water mixtures

**********

IO3- HL Iodate CAS 7782-68-5 (1257)
Iodate;

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

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Rb+ con none 25°C 0.0 U K1=-0.20 1971JBa (8549) 56

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Rb+ con none 25°C 0.0 U K1=-0.19 1969BJa (8550) 57

**********

IrCl6--- H3L (1615)

Hexachloroiridate;

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | NaClO4 | 505°C | 0.10M | U | | 1978SKe (8624) | | 58 |
| | | | | | | | B((RbIrCl6)--)=2.21 | | |
| | | | | | | | B((RbIrCl6)-)=2.04 | | |

**********

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

Nitrite;

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | none | 25°C | 0.0 | U | | K1=-0.53 | 1964PSh (9403) | 59 |

**********

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

Nitrate;

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=1.72 | 1974BMc (9903) | 60 |

Medium: Hexamethylphosphotriamide

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | none | 25°C | 0.0 | U | | K1=-0.09 | 1974MWc (9904) | 61 |

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | diox/w | 25°C | 62% | U | I | K1=4.08 | 1972SAc (9905) | 62 |

Medium: Dioxan/MeOH. In 0% dioxan: K1=1.25. 29.3%: K1=1.98. 45.2%: 2.78. 52.6%: 3.26

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | oth/un | 25°C | 0.0 | U | | K1=-0.08 | 1971JBa (9906) | 63 |

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | oth/un | 25°C | 0.0 | U | | K1=-0.05 | 1969BJa (9907) | 64 |

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | diox/w | 25°C | 75% | U | I | K1=2.63 | 1969SBe (9908) | 65 |

In 65.1% dioxan: K1=1.65. 68.5%: 1.94. 71.1%: 2.20

**********

PF6- HL (2404)

Hexafluorophosphate;

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=1.4 | 1975YKa (12767) | 66 |

Medium: MeCN

**********

P4O12---- H4L CAS 13598-74-8 (234)

Cyclotetrametaphosphate;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.10M | U | | K1=1.60 | 1976KOb (14019) | 67 |

P6O18------ H6L (233)
Cyclohexametaphosphate;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.10M | U | | K1=2.30 | 1976KOb (14074) | 68 |

P8O24-------- H8L (232)
Cyclooctametaphosphate;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.10M | U | | K1=2.90 B2=5.15 | 1976KOb (14086) | 69 |

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

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | NaCl | 37°C | 0.10M | C | I | K1=0.60 | 1982DRb (16515) | 70 |

Data for I=0.03-0.50 M NaCl. At I=0.0 M, K1=0.94

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | oth/un | 25°C | 0.50M | U | TI | K1=0.60 | 1980GAb (16516) | 71 |

Method: Ultrasonic absorption. Medium: Na2SO4

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | none | 25°C | 0.0 | U | | | 1978FFa (16517) | 72 |
| | | | | | | | K(Rb+RbSO4)=0.076 | | |
| Rb+ | oth | oth/un | 25°C | .264M | U | | K1=0.60 | 1975REa (16518) | 73 |
| Rb+ | sp | oth/un | 20°C | 2.30M | U | M | | 1971GFa (16519) | 74 |
| | | | | | | | K(Rb2L+TiOL)=-0.4 | | |

Medium: H2SO4

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 20°C | 0.10M | U | | | 1963SGd (17389) | 75 |
| | | | | | | | K(Rb+H15L10)=1.78 | | |
| | | | | | | | K(Rb+H14L10)=2.78 | | |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.16M | U | I | K1=-0.37 | 1985RSa (20154) | 76 |

K1=-0.33 (I=0.04); -0.36 (0.25); -0.32 (0.49); -0.21 (1.00)

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | non-aq | 25°C | 100% | U | H | K1=6.14 | 1981TMb (20155) | 77 |

Medium: Glacial acetic acid. Alternative method: Spectrophotometry.
DH(K1)=-18.0 kJ mol-1

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | non-aq | 25°C | 100% | U | | K1=6.04 | 1964KLa (20156) | 78 |

Medium: ethanoic acid

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | U | | K1=6.89 | 1961PSa (20157) | 79 |

Medium: ethanoic acid

**********

C2H6O L Ethanol CAS 64-17-5 (1913)

Ethanol; CH3.CH2.OH

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | oth/un | 25°C | 0.10M | U | H | | 1975BBa (22030) | 80 |

DH=-403.4 kJ mol-1 in H2SO4

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | oth/un | 25°C | 0.10M | U | | K1=0.04 | 1964RZa (30713) | 81 |

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | ? | 0.28M | U | | K1=0.18 | 1963EDa (30714) | 82 |

Medium: Me4NBr

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | diox/w | 30°C | 75% | U | | K1=7.16 B2=11.18 | 1975MMa (38071) | 83 |

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | oth/un | 25°C | 0.04M | C | | K1=0.47 | 1998TIa (42144) | 84 |

Method: capillary electrophoresis.
Medium: 0.005 M phosphate buffer, pH 7.1, 0.04 M MCl.

---

Rb+ dis oth/un 25°C dil C 1998TKa (42145) 85

K(RbA+L)=4.62

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

---

Rb+ dis none 25°C 0.00 U I K1=1.94 1972IWc (42146) 86

In nitrobenzene: K1=2.65

---

Rb+ con none 25°C 0.00 M K1=1.94 1971YIa (42147) 87

---

Rb+ dis oth/un 25°C var U K1=2.5 1970SSb (42148) 88

Method: paper chromatography

**********

C6H4N2O5 HL CAS 50-28-5 (505)

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

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| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=1.72 | 1973FGa (42237) | 89 |

Medium: tetrahydrofuran

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | KCl | 37°C | 0.15M | C | | K1=0.52 B2=0.12 | 1981CDb (46245) | 90 |
| Rb+ | ISE | oth/un | 25°C | 0.10M | U | | K1=0.49 | 1964RZa (46246) | 91 |

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | R4N.X | 25°C | 0.10M | C | | K1=0.25 | 1985HAd (47005) | 92 |

**********

C6H15NO3 Triethanolamine CAS 102-71-6 (447)

Tris-(2-hydroxyethyl)amine; L

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=1.89 | 1976FGb (51303) | 93 |

**********

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 |
|---|---|---|---|---|---|---|---|---|---|

Rb+ gl R4N.X 25°C 0.10M U K1=2.57 1991BSa (51540) 94
B(RbHL)=11.32
B(RbH2L)=17.80

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | diox/w | 25°C | 75% | U | | K1=3.48 B2=7.05 | 1979MMa (61306) | 95 |

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | non-aq | 25°C | 100% | C | H | K1=0.66 B2= 0.96 | 1996OKa (62721) | 96 |

Medium: DMF, 0.10 M Et4NCl. DH(K1)=-16.8 kJ mol-1, DS(K1)=-44 J K-1 mol-1; DH(K2)=-3, DS(K2)=-5.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=2.9 | 1993EVa (62722) | 97 |

Medium: THF+CHCl3 (4:1 vol)

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | C | | K1=1.65 B2= 2.52 | 1987ZBb (62723) | 98 |

Medium: MeOH.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | vlt | non-aq | 25°C | 100% | U | | K1=1.69 | 1980MDa (62724) | 99 |

Medium: propylene carbonate

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | I | K1=2.0 | 1993EVa (62995) | 100 |

Medium: THF+CHCl3 4:1(vol). In 100% THF: K1=2.0

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | non-aq | 25°C | 100% | U | I | K1=2.82 | 1996WPa (63298) | 101 |

Medium: acetonitrile, 0.05 M NEt4ClO4. In propylene carbonate K1=4.1; in dimethylformamide K1<2

**********

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 |
|---|---|---|---|---|---|---|---|---|---|

```
------------------------------------------------------------------------------
Rb+        oth diox/w 25°C  75%  U        K1=3.63   B2=7.28   1979MMa (66538) 102
******************************************************************************
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
------------------------------------------------------------------------------
Rb+        gl  diox/w 30°C  75%  U        K1=4.06   B2=7.74   1975MMa (67748) 103
******************************************************************************
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
------------------------------------------------------------------------------
Rb+        gl  none   25°C  0.0  C                        1990CDc (68527) 104
                                          Kso(RbH3L)=-17.5
Additional technique: spectrophotometry.
******************************************************************************
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
------------------------------------------------------------------------------
Rb+        oth diox/w 25°C  75%  U        K1=3.50   B2=7.35   1979MMa (71114) 105
******************************************************************************
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
------------------------------------------------------------------------------
Rb+        gl  oth/un 25°C 0.32M U      T K1=0.59        1965BCa (74125) 106
                                          K(Rb+HL)=-0.57
Medium: CsCl
******************************************************************************
C10H16N5O13P3        H4L    ATP              CAS 56-65-5  (403)
Adenosine-5'-triphosphoric acid;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Rb+        gl  R4N.X  25°C 0.10M C      T K1=1.11        1991SMa (74812) 107
IUPAC evaluation
------------------------------------------------------------------------------
Rb+        gl  oth/un 25°C 0.25M U   H    K1=1.23        1986RSa (74813) 108
                                          B(RbHL)=6.69
------------------------------------------------------------------------------
Rb+        gl  oth/un 25°C 0.32M U        K1=0.9    B2=0.90   1965BCa (74814) 109
                                          K(Rb+HL) < -0.3
Medium: CsCl
******************************************************************************
```

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | alc/w | 25°C | 100% | C | I T | K1=2.80 B2= 5.03 | 2003ADa (76115) | 110 |

IUPAC Tentative. Medium: 0-0.1 M various.

| Rb+ | con | non-aq | 25°C | 100% | C | H | K1=3.73 B2= 5.30 | 1999WBa (76116) | 111 |
|---|---|---|---|---|---|---|---|---|---|

Medium: N,N-dimethylformamide. By calorimetry: DH(K1)=-22.5 kJ mol-1, DH(K2)=-28.7 kJ mol-1.

| Rb+ | nmr | non-aq | RT | 100% | U | K1=1.84 | 1996GMc (76117) | 112 |
|---|---|---|---|---|---|---|---|---|

Method: 133Cs nmr. Medium: N,N-dimethylformamide

| Rb+ | cal | non-aq | 25°C | 100% | M | H | K1=-24.3 | 1994BCd (76118) | 113 |
|---|---|---|---|---|---|---|---|---|---|

Medium: acetone. DH(K1)=-24.3 kJ mol-1, TDS=0.4

| Rb+ | nmr | non-aq | 25°C | 100% | U | K1=3.51 | 1991SKa (76119) | 114 |
|---|---|---|---|---|---|---|---|---|

Medium: MeCN

| Rb+ | cal | non-aq | 25°C | 100% | C | H | K1=3.98 | 1988BUb (76120) | 115 |
|---|---|---|---|---|---|---|---|---|---|

Medium: acetonitrile. DH(K1)=-28.6 kJ mol-1, DS(K1)=-20 J K-1 mol-1.

| Rb+ | con | non-aq | 25°C | 100% | C | T | K1=3.4 | 1988TKa (76121) | 116 |
|---|---|---|---|---|---|---|---|---|---|

Medium: MeCN

| Rb+ | con | non-aq | 25°C | 100% | C | I | K1=2.88 B2= 5.11 | 1987ZBb (76122) | 117 |
|---|---|---|---|---|---|---|---|---|---|

Medium: MeOH. In 70% w/w MeOH/H2O, K1=2.81, K2=1.83.

| Rb+ | dis | non-aq | 25°C | 100% | U | K1=3.0 | 1980TYa (76123) | 118 |
|---|---|---|---|---|---|---|---|---|

Medium: propylene carbonate

| Rb+ | oth | oth/un | 25°C | ? | U | K1=0.58 | 1977RLa (76124) | 119 |
|---|---|---|---|---|---|---|---|---|

Method: ultrasound absorption

| Rb+ | cal | oth/un | 25°C | 0.10M | U | H T | K1=0.62 | 1976ITb (76125) | 120 |
|---|---|---|---|---|---|---|---|---|---|

DH=-7.95 kJ mol-1.

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 25°C | 100% | C | | K1=4.90 | 1998KSc (76470) | 121 |

Medium: 1,2-dichloroethane.

| Rb+ | con | non-aq | 25°C | 100% | U | I | K1=2.9 | 1993EVa (76471) | 122 |
|---|---|---|---|---|---|---|---|---|---|

Medium: THF+CHCl3 4:1(vol). In 100% THF: K1=2.7

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | nmr | oth/un | 100°C | ? | U | | K1=-0.8 | 1968SSa (79329) | 123 |
| Rb+ | nmr | oth/un | 100°C | 0.50M | U | | K1=-0.8 | 1968SSc (79330) | 124 |

Medium: Rb4L

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | diox/w | 30°C | 75% | U | | K1=4.12 | 1975MMa (79752) | 125 |

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | none | 25°C | 0.0 | U | | Keff=3.48 | 1991IOa (79870) | 126 |

By solvent extraction of the metal picrate into dichloromethane.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | none | 25°C | 0.0 | C | M | | 1989TKc (79871) | 127 |

Method: extraction of metal picrate/L from H2O into benzene.
K(Rb+HA(org)+L(org)=RbAL(org)+H)=-0.84. HA is picric acid.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | C | I | K1=2.9 | 1988TKa (79872) | 128 |

Medium: MeCN. In propylene carbonate K1=2.6; in MeOH 2.5

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 25°C | 100% | C | | K1=4 | 1998KSc (80083) | 129 |

Medium: 1,2-dichloroethane.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | oth/un | 25°C | var | U | | K1=2.0 | 1970SSb (80084) | 130 |

Method: paper chromatography

**********

C12H20O8 L CAS 62796-84-3 (2141)
1,4,7,10,13,16-Hexaoxacyclooctadecane-2,6-dione;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | alc/w | 25°C | 100% | U | H | K1=2.09 | 1980BMa (82658) | 131 |

Medium: MeOH. DH=-29.2 kJ mol-1.
---
Rb+ cal alc/w 25°C 100% U H K1=2.09 1980LIb (82659) 132
Medium: MeOH. DH=-29.2 kJ mol-1.
**********
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
---
Rb+ oth diox/w 25°C 75% U K1=3.48 B2=7.25 1979MMa (82861) 133
**********
C12H24O4S2 L CAS 296-39-9 (4938)
1,4,10,13-Tetraoxa-7,16-dithiacyclooctadecane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ nmr non-aq 25°C 100% U K1=3.25 1991SKa (83142) 134
In acetonitrile.
**********
C12H24O4S2 L (6528)
7,10,13,16-Tetraoxa-1,4-dithiacyclooctadecane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ nmr non-aq 25°C 100% U K1=1.78 1991SKa (83152) 135
In acetonitrile.
**********
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
---
Rb+ ISE alc/w 25°C 100% C IH T K1=5.4 2003ADa (83591) 136
IUPAC Tentative. Medium: 0-0.1 M various. DH(K1)=-50.0 kJ mol-1
In H2O: K1=1.51, DH(K1)=-16.0. In PC K1=5.33, DH(K1)=-44
---
Rb+ dis non-aq 25°C 100% U K1=9.85 B2=11.68 2000KSa (83592) 137
Medium: 1,2-dichloroethane
---
Rb+ con non-aq 25°C 100% C T H K1=>5.5 2000SSc (83593) 138
Medium: acetonitrile. Data for 15-45 C. DH(K1)=-24 kJ mol-1,
DS(K1)=23 J K-1 mol-1.
---
Rb+ cal non-aq 25°C 100% C H K1=4.14 1999WBa (83594) 139
Medium: N,N-dimethylformamide. DH(K1)=-41.1 kJ mol-1.
---
Rb+ dis non-aq 25°C 100% C I 1998TKa (83595) 140
K(Rb+A+L(org)=RbAL(org))=6.33
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.

---

Rb+ cal non-aq 25°C 100% C K1=5.84 1997DZa (83596) 141
Medium: benzonitrile. DH(K1)=-50.07 kJ mol-1, DS(K1)=-56.1 J K-1 mol-1.

---

Rb+ cal R4N.X 25°C 0.10M C H T K1=1.79 1996BCh (83597) 142
Medium: 0.10 M Et4NClO4. DH(K1)=-12.3 kJ mol-1.

---

Rb+ nmr non-aq RT 100% U K1=3.75 1996GMc (83598) 143
Method: 133Cs nmr. Medium: N,N-dimethylformamide

---

Rb+ cal alc/w 25°C 80% C H K1=3.99 1995KZa (83599) 144
Medium: 80% v/v CH3OH/H2O. DH(K1)=-36.6 kJ mol-1, DS(K1)=-46.3 J K-1 mol-1

---

Rb+ cal non-aq 25°C 100% U IH T K1=4.94 1995OKb (83600) 145
Medium: Acetonitrile, 0.1 M Et4NClO4. DH(K1)=-15 kJ mol-1
In propylene carbonate K1=5.33, DH(K1)=-44

---

Rb+ cal non-aq 25°C 100% M H K1=5.16 1994BCd (83601) 146
Medium: acetone. DH(K1)=-47.8 kJ mol-1, TDS=-18.5

---

Rb+ cal non-aq 25°C 100% U H T K1=3.92 1994OOa (83602) 147
Medium: DMF, 0.1 M Et4NClO4. DH(K1)=-44.6 kJ mol-1, DS=-74 J K-1 mol-1

---

Rb+ dis non-aq 25°C 100% U 1993INa (83603) 148
B(RbPL)=5.96
K is the equilibrium constant for extraction of the metal picrate (P) into CH2Cl2. For extraction from D2O, B=5.95.

---

Rb+ con oth/un 25°C 0.05M M K1=5.35 1992BUb (83604) 149
K1=5.32 (by calorimetry); K1=5.82 (by calorimetric competitve titration)

---

Rb+ cal R4N.X 25°C 0.10M C H K1=1.40 1992OIa (83605) 150
DH(K1)=-20.9 kJ mol-1, DS=-43 J K-1 mol-1

---

Rb+ ix none 25°C 0.0 U K1=3.4 1991BMb (83606) 151

---

Rb+ oth non-aq 25°C 100% C K1=3.79 1989BBh (83607) 152
Method: FABMS. Medium: glycerol.

---

Rb+ cal non-aq 25°C 100% C H K1=5.24 1988BUb (83608) 153
Medium: acetonitrile. DH(K1)=-12.6 kJ mol-1, DS(K1)=57.4 J K-1 mol-1.

---

Rb+ vlt alc/w 25°C 100% U K1=5.43 1985ZBa (83609) 154
Medium: MeOH

---

Rb+ vlt alc/w 25°C 100% U K1=5.47 1984ZBa (83610) 155
Medium: MeOH, 0.1 M Et4NI

---

Rb+ con alc/w 25°C 100% U K1=5.73 1983LSa (83611) 156

---
Rb+ cal alc/w 25°C 100% U H K1=5.32 1980BMa (83612) 157
Medium: MeOH. DH=-50.6 kJ mol-1.
---
Rb+ cal alc/w 25°C 100% U H T K1=5.32 1980LIa (83613) 158
Medium: MeOH. DH=-50.6 kJ mol-1.
---
Rb+ dis non-aq 25°C 100% U K1=5.3 1980TYa (83614) 159
Medium: propylene carbonate
---
Rb+ cal alc/w 25°C 70% U H K1=3.46 1976ITa (83615) 160
Medium: 70% w/w MeOH/H2O. DH(K1)=-38.8 kJ mol-1.
---
Rb+ cal oth/un 25°C 0.10M U H T K1=1.56 1976ITb (83616) 161
DH=-16.0 kJ mol-1.
**********
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
---
Rb+ nmr non-aq RT 100% U K1=1.68 1996GMc (83886) 162
Method: 133Cs nmr. Medium: N,N-dimethylformamide
---
Rb+ cal non-aq 25°C 100% M H K1=2.70 1994BCd (83887) 163
Medium: acetone. DH(K1)=-15.0 kJ mol-1, TDS=0.3
---
Rb+ nmr non-aq 25°C 100% U K1=3.26 1991SKa (83888) 164
In acetonitrile.
---
Rb+ cal non-aq 25°C 100% U H K1=3.32 1986BUb (83889) 165
In CH3CN. DH=-10.1 kJ mol-1
---
Rb+ cal alc/w 25°C 100% U H K1=<1 1986BUd (83890) 166
In MeOH. DH >-2 kJ mol-1
---
Rb+ con non-aq 25°C 100% U K1=3.37 1980KMb (83891) 167
Medium: MeCN
**********
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
---
Rb+ con non-aq 25°C 100% U K1=3.9 1993EVa (84018) 168
Medium: THF+CHCl3 (4:1 vol). Also data for other solvents
---
Rb+ cal oth/un 25°C 0.05M M K1=1.98 1992BUb (84019) 169
K1=2.07 (by conductivity)
**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | non-aq | 25°C | 100% | C | | K1=2.78 | 1997WWa (84092) | 170 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.10M | M | | B(RbH2L)=27.35<br>B(RbH3L)=36.28<br>B(RbH4L)=43.72 | 1990DSa (84419) | 171 |

Medium: Me4NNO3

**********

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

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | C | I | K1=2.64 | 1992TFa (86485) | 172 |

Medium: acetonitrile. In propylene carbonate, K1=2.14.

| Rb+ | con | alc/w | 25°C | 100% | U | | K1=2.06 | 1991IOa (86486) | 173 |
|---|---|---|---|---|---|---|---|---|---|

Medium: MeOH

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | C | I | K1=4.06 | 2000TMb (86503) | 174 |

Medium: CH3CN. In other media, K1=3.72 (propylene carbonate), 3.76 (MeOH), 2.25 (DMF), 1.73 (DMSO).

| Rb+ | con | oth/un | 25°C | dil | C | | K1=1.33 | 1999TMa (86504) | 175 |
|---|---|---|---|---|---|---|---|---|---|

Self medium (RbCl).

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 24°C | 100% | C | | K(Rb+A+L)=5.40 | 2002MRd (88359) | 176 |

Medium: CDCl3. HA is picric acid.
---
Rb+ con non-aq 25°C 100% C K1=3.43 B2= 3.43 2000ICa (88360) 177
Medium: nitromethane.
---
Rb+ con non-aq 25°C 100% C H K1=2.77 B2= 3.79 1999WBa (88361) 178
Medium: N,N-dimethylformamide. By calorimetry: DH(K1)=-16.2 kJ mol-1,
DH(K2)=-24.8 kJ mol-1.
---
Rb+ nmr non-aq RT 100% U K1=2.15 1996GMc (88362) 179
Method: 133Cs nmr. Medium: N,N-dimethylformamide
---
Rb+ dis oth/un 25°C 0 U K1=2.66 1994OUa (88363) 180
---
Rb+ nmr non-aq 25°C 100% U K1=2.91 1991SKa (88364) 181
Medium: MeCN
---
Rb+ cal non-aq 25°C 100% C H K1=3.84 1988BUb (88365) 182
Medium: acetonitrile. DH(K1)=-18.9 kJ mol-1, DS(K1)=9.7 J K-1 mol-1.
---
Rb+ con non-aq 25°C 100% C I K1=2.72 1988TKb (88366) 183
Medium: MeCN. In propylene carbonate K1=2.38; in MeOH 2.40
---
Rb+ con non-aq 25°C 100% C T H K1=2.82 1988TMb (88367) 184
Medium: acetonitrile. Data for 15-35 C. Anion: tetraphenylborate.
DH(K1)=-29.7 kJ mol-1, DS(K1)=-46.0 J K-1 mol-1.
---
Rb+ sp non-aq 22°C 100% U K1=5.40 1987CCc (88368) 185
In deuterochloroform
---
Rb+ con non-aq 25°C 100% C I K1=2.68 B2= 5.38 1987ZBb (88369) 186
Medium: MeOH. In 70% w/w MeOH/H2O, K1=1.77, K2=1.96.
---
Rb+ vlt alc/w 25°C 100% U K1=3.12 1985ZBa (88370) 187
Medium: MeOH
---
Rb+ vlt alc/w 25°C 100% U K1=3.11 1984ZBa (88371) 188
Medium: MeOH, 0.1 M Et4NI
---
Rb+ con non-aq 25°C 100% U K1=2.38 1982TAa (88372) 189
Medium: propylene carbonate
---
Rb+ cal alc/w 25°C 70% U H K1=1.8 B2=3.77 1976ITa (88373) 190
Medium: 70% w/w MeOH/H2O. DH(B2)=-50.2 kJ mol-1.
**********
C14H24O8 L CAS 96813-83-1 (2271)
1,4,7,10,13,16-Hexaoxacycloeicos-17,20-dione;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---

Rb+ cal alc/w 25°C 100% U H K1=1.74 1980LIb (90045) 191
Medium: MeOH. DH=-29.3 kJ mol-1.
**********
C14H24O8S L CAS 63689-67-8 (2274)
1,4,7,10,13,16-Hexaoxa-19-thia-cycloheneicos-17,21-dione;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ cal alc/w 25°C 100% U H K1=2.52 1980LIb (90048) 192
Medium: MeOH. DH=-23.0 kJ mol-1.
**********
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
---
Rb+ cal non-aq 25°C 100% C H 1999WBa (90431) 193
Medium: N,N-dimethylformamide. DH(K1)=-0.9 kJ mol-1.
---
Rb+ cal non-aq 25°C 100% M H K1=1.52 1994BCd (90432) 194
Medium: acetone. DH(K1)=-2.1 kJ mol-1, TDS=6.5
---
Rb+ cal non-aq 25°C 100% U H K1=3.9 1986BUb (90433) 195
In CH3CN. DH=-9.5 kJ mol-1
---
Rb+ cal alc/w 25°C 100% U H K1=2.50 1986BUd (90434) 196
In MeOH. DH=-8.0 kJ mol-1
---
Rb+ ISE non-aq 25°C 100% U K1=<2.2 1980CRa (90435) 197
Medium: Propylene carbonate
---
Rb+ EMF non-aq 25°C 100% C K1=<2.0 1979BLb (90436) 198
Method: Ag electrode; competition with Ag+. Medium: MeOH, 0.05 M
Me4NClO4.
---
Rb+ gl R4N.X 25°C 0.05M C I K1=<2 1975LSc (90437) 199
In 95% MeOH, 0.05 M Me4NBr: K1=1.9
**********
C14H28O7 L 21-Crown-7 CAS 33089-36-0 (2264)
1,4,7,10,13,16,19-Heptaoxacycloheneicosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sol non-aq 25°C 100% C K1=4.79 1999KCa (90536) 200
Medium: acetonitrile.
---
Rb+ nmr non-aq 25°C 100% U K1=4.40 1991SKa (90537) 201
In acetonitrile.
---
Rb+ cal alc/w 25°C 100% U H K1=4.86 1980LIa (90538) 202

Medium: MeOH. DH=+40.4 kJ mol-1.
**********
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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | alc/w | 25°C | 95% | C | | K1=4.06 | 2004KVa (90587) | 203 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | non-aq | 25°C | 100% | U | | K1=2.50 | 1993RPa (90634) | 204 |

Medium: dimethylformamide, 0.05 M Et4NClO4. By competition with Ag+.
**********
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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 25°C | 100% | C | | K1=7.35 | 1998KSc (90708) | 205 |

Medium: 1,2-dichloroethane.
---
| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=4.4 | 1993EVa (90709) | 206 |

Medium: THF+CHCl3 (4:1 vol). Also data for other solvents
**********
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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | diox/w | 30°C | 75% | U | | K1=3.52 | 1954FUa (91559) | 207 |

**********
C15H18NO7Cl L CAS 71022-76-9 (2322)
19-Chloro-3,6,9,12,15-pentaoxa-21-azabicyclo[15.3.1]heneicosa-1(21),17,19-teiene-2,16-dione;
---
| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | alc/w | 25°C | 100% | U | H | K1=3.56 | 1980BMa (91995) | 208 |

Medium: MeOH. DH=-38.6 kJ mol-1.
**********
C15H19NO7 L CAS 64397-58-4 (2170)
3,6,9,12,15-Pentaoxa-21-azabicyclo[15.3.1]heneicosa-1(21),17,19-triene-2,16-dione;
---
| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|

```
Rb+        cal alc/w  25°C 100%  U   H    K1=4.24        1980BMa (92125) 209
Medium: MeOH. DH=-37.9 kJ mol-1.
--------------------------------------------------------------------------------
Rb+        cal alc/w  25°C 100%  U   H    K1=4.24        1980LIb (92126) 210
Medium: MeOH. DH=-37.9 kJ mol-1
********************************************************************************
C15H23NO5               L                      CAS 53914-89-9  (2262)
3,6,9,12,15-Pentaoxa-21-azabicyclo[15.3.1]heneicosa-1(21),17,19-triene;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Rb+        cal alc/w  25°C 100%  U   H    K1=4.56        1980BMa (92275) 211
Medium: MeOH. DH=-36.5 kJ mol-1.
--------------------------------------------------------------------------------
Rb+        cal alc/w  25°C 100%  U   H    K1=4.56        1980LIa (92276) 212
Medium: MeOH. DH=-36.4 kJ mol-1.
********************************************************************************
C15H24O6               HL                     CAS 57722-03-9  (2353)
1-Hydroxy-2-(1,4,7,10,13-pentaoxatridecyl)benzene; HO.C6H4.O(CH2CH2O)4CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Rb+        sp  alc/w  25°C 100%  U        K1=3.34        1981EMb (92347) 213
Medium: MeOH
********************************************************************************
C15H26O8               L                      CAS 96517-83-8  (2272)
1,4,7,10,13,16-Hexaoxacycloheneicos-17,21-dione;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Rb+        cal alc/w  25°C 100%  U   H    K1=1.63        1980LIb (92458) 214
Medium: MeOH. DH=-28.0 kJ mol-1.
********************************************************************************
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
--------------------------------------------------------------------------------
Rb+        EMF non-aq 25°C 100%  U        K1=2.27        2001WBa (92577) 215
Medium: DMF, 0.05 M Et4NClO4. Also data for the 1,4,7-tris((S)-2-hydroxy-
2-phenyethyl- derivative (K1=1.91). Competition with Ag+.
********************************************************************************
C16H20N3O8F3           L                        (1041)
2,4-Dinitro-6-trifluoromethylphenyl-aminomethyl-12-crown-4
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Rb+        sp  mixed  25°C  16%  U        K1=1.64        1984BPa (94085) 216
                                         K(Rb+HL)=1.01
********************************************************************************
```

C16H22O6 HL (6823)
3,6,9,12-Tetraoxabicyclo[12.3.1]octadeca-1(18),14,16-triene-18-ethanoic acid;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|---|
| Rb+ | kin | alc/w | 25°C | 100% | U | | K1=1.11 | | 1992CDc (94245) | 217 |

Medium:MeOH. Data also for other related ligands

**********

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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 25°C | 100% | U | H | | | 1979KLa (94350) | 218 |
| | | | | | | | K(Rb(picrate)+L)=4.8 | | | |

Medium: CHCl3

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 24°C | 100% | C | | | | 1977MTc (94351) | 219 |
| | | | | | | | K(RbA+L)=4.81 | | | |

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

**********

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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | C | | K1=5.25 | B2= 8.94 | 2000ICa (94449) | 220 |

Medium: nitromethane.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 25°C | 100% | U | | K1=8.96 | B2=10.86 | 2000KSa (94450) | 221 |

Medium: 1,2-dichloroethane

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | alc/w | 35°C | 3.0% | C | | K1=1.23 | | 1999MTd (94451) | 222 |

Method: capillary zone electrophoresis. Medium: 3% v/v EtOH/H20, 0.005 M phosphate buffer, pH 7.0

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | non-aq | 25°C | 100% | C | H | K1=3.46 | | 1999WBa (94452) | 223 |

Medium: N,N-dimethylformamide. DH(K1)=-29.3 kJ mol-1.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | oth/un | 25°C | 0 | U | | K1=4.38 | | 1994OUa (94453) | 224 |
| Rb+ | nmr | non-aq | 25°C | 100% | U | | K1=3.40 | | 1991SKa (94454) | 225 |

Medium: MeCN

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | none | 25°C | 0.0 | U | | K1=1.15 | | 1989TKa (94455) | 226 |
| Rb+ | sp | non-aq | 22°C | 100% | U | | K1=6.58 | | 1987CCc (94456) | 227 |

In deuterochloroform

```
Rb+        cal non-aq 25°C 100%  C   H    K1=4.48        1986ICa (94457) 228
Medium: MeOH. DH(K1)=-43.0 kJ mol-1, DS(K1)=-58.4 J K-1 mol-1.
-------------------------------------------------------------------------------
Rb+        sp  diox/w 25°C  0.0  U  I     K1=2.45        1983KOa (94458) 229
On PVA. In 24.4% w/w dioxan/H2O. Data given for 9.7-84.6 w/w mixtures.
-------------------------------------------------------------------------------
Rb+        sp  mixed  25°C  0.0  U  I     K1=2.34        1983KOa (94459) 230
On PVA. In 21.9% w/w tetrahydrofuran/H2O. Data given for 11.1-86.4 w/w mix
-------------------------------------------------------------------------------
Rb+        sp  alc/w  25°C 100%  U        K1=4.62        1981EMb (94460) 231
Medium: MeOH
*******************************************************************************
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
-------------------------------------------------------------------------------
Rb+        ISE non-aq 25°C 100%  C   H    K1=5.19        1999WBa (95274) 232
Medium: N,N-dimethylformamide. Method: competitive titration against
Ag+, using Ag+ ISE. By calorimetry: DH(K1)=-50.2 kJ mol-1.
-------------------------------------------------------------------------------
Rb+        gl  R4N.X  25°C 0.05M C   H    K1=3.2         1996BCh (95275) 233
Medium: 0.05 M Et4NClO4. By calorimetry: DH(K1)=-29.9 kJ mol-1.
-------------------------------------------------------------------------------
Rb+        cal non-aq 25°C 100%  M   H    K1=6.50        1994BCd (95276) 234
Medium: acetone. DH(K1)=-53.7 kJ mol-1, TDS=-16.8
-------------------------------------------------------------------------------
Rb+        ISE non-aq 25°C 100%  U   H    K1=6.74        1986BUb (95277) 235
In CH3CN. DH=-56.3 kJ mol-1
-------------------------------------------------------------------------------
Rb+        cal alc/w  25°C 100%  U   H    K1=7.35        1986BUd (95278) 236
In MeOH. DH=-55.7 kJ mol-1
-------------------------------------------------------------------------------
Rb+        nmr non-aq 25°C 100%  U        K1=9.31        1986CHc (95279) 237
In CDCl3 saturated with D2O
-------------------------------------------------------------------------------
Rb+        ISE non-aq 25°C 100%  U  I     K1=5.35        1981CRa (95280) 238
Medium: DMF. In DMSO: 4.64; in EtOH: 6.88; in N-methylpropionamide: 5.55
-------------------------------------------------------------------------------
Rb+        ISE non-aq 25°C 100%  U        K1=7.0         1980CRa (95281) 239
Medium: Propylene carbonate
-------------------------------------------------------------------------------
Rb+        ISE alc/w  25°C 100%  U        K1=6.74        1978CSb (95282) 240
Medium: MeOH
-------------------------------------------------------------------------------
Rb+        cal R4N.X  25°C 0.06M C   H                   1976KLc (95283) 241
Medium: 0.057 M Me4NBr. Method: flow microcalorimetry.
DH(K1)=-22.6 kJ mol-1, DS(K1)=-27 J K-1 mol-1.
-------------------------------------------------------------------------------
Rb+        gl  R4N.X  25°C 0.05M C  I     K1=2.55        1975LSc (95284) 242
```

In 95% MeOH: K1=5.80; 100%: > 6

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | alc/w | 25°C | 100% | U | H | K1=3.08 | 1990KMb (95322) | 243 |

Medium: MeOH. DH=-22.7 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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | C | I | K1=2.34 | 1992TFa (95392) | 244 |

Medium: acetonitrile. In propylene carbonate, K1=2.05.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | alc/w | 25°C | 100% | U | | K1=2.05 | 1991IOa (95393) | 245 |

Medium: MeOH

**********

C16H32O8 L 24-Crown-8 CAS 33089-37-1 (5149)

1,4,7,10.13,16,19,22-Octaoxacyclotetracosane;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sol | non-aq | 25°C | 100% | C | | K1=3.94 | 1999KCa (95400) | 246 |

Medium: acetonitrile.

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | alc/w | 25°C | 100% | U | I | K1=3.97 | 1994LLa (95420) | 247 |

Medium: MeOH, 0.05M Et4NClO4. Also data for acetonitrile: K=4.39, PC: K=4.2
DMF: K=2.84 and H2O: K<2. 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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | non-aq | 25°C | 100% | U | | K1=3.56 | 1993RPa (95456) | 248 |

Medium: dimethylformamide, 0.05 M Et4NClO4. By competition with Ag+.

**********

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 |
|---|---|---|---|---|---|---|---|---|---|

```
--------------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  U        K1=4.7         1993EVa (95495) 249
Medium: THF+CHCl3 (4:1 vol). Also data for other solvents
********************************************************************************
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
--------------------------------------------------------------------------------
Rb+        EMF non-aq 25°C 100%  U  I     K1=3.00        1996WPa (95579) 250
Medium: acetonitrile, 0.05 M NEt4ClO4.  In propylene carbonate K1=4.23
--------------------------------------------------------------------------------
Rb+        gl  alc/w  25°C 100%  C  I     K1=2.20        1993TCa (95580) 251
Medium: MeOH, 0.05 M Et4NClO4. In DMF, K1=1.39
********************************************************************************
C17H23NO6               L                          (7047)
5'-(N-Acrylamide)-benzo-15-crown-5; CH2:CH.CO.NH.C14H19O5
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Rb+        sp  non-aq 25°C 100%  U        K1=8.98        1979KMb (96408) 252
Medium: CHCl3
********************************************************************************
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
--------------------------------------------------------------------------------
Rb+        sp  non-aq 22°C 100%  U        K1=5.73        1987CCc (96525) 253
In deuterochloroform
********************************************************************************
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
--------------------------------------------------------------------------------
Rb+        EMF non-aq 25°C 100%  C  I     K1=6.66        1993DLb (96750) 254
Medium: propylene carbonate, 0.05 M Et4NClO4. In acetonitrile, K1=5.5.
--------------------------------------------------------------------------------
Rb+        gl  R4N.X  25°C 0.05M C  I     K1=3.28        1992CGb (96751) 255
Medium: Et4NClO4. In MeOH: K1=5.7; in DMF K1=3.82
********************************************************************************
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
--------------------------------------------------------------------------------
Rb+        gl  alc/w  25°C  95%  C        K1=2.78        2004KVa (96761) 256
Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.
********************************************************************************
```

C18H23NO8 L CAS 332843-39-7 (8209)
2,3,5,6,8,9,11,12,14,15-Decahydro-1,4,7,10,13,16-hexaoxacyclooctadecino[2,3-]isoind
ole18,20dione;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp non-aq 25°C 100% C K1=3.9 2001OYa (97577) 257
Medium: methanol. For the N-propyl derivative, K1=3.8.
**********
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
---
Rb+ sp non-aq 22°C 100% U K1=5.04 1987CCc (97838) 258
In deuterochloroform
**********
C18H28O6 L CAS 85556-93-0 (642)
2,3-Benzo-8,15-dimethyl-1,4,7,10,13,16-hexaoxacycloocotadeca-2-ene;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con alc/w 25°C 100% U K1=3.90 1983LSa (97844) 259
Medium: MeOH
**********
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
---
Rb+ sp non-aq 22°C 100% U K1=7.37 1987CCc (97859) 260
In deuterochloroform
**********
C18H36N2O5 L Cryptand 1,2,2H (6605)
1,10-Diaza-4,7,14,20,23-Pentaoxabicyclo[8.8.7]pentacosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl alc/w 25°C 95% M K1=3.41 1990LNa (98408) 261
Medium: 95% MeOH, 0.05 M Bu4NBr. For the 12,16-dihydroxy- analogue: K1 < 2
**********
C18H36N2O5 L Cryptand 2,2,1H CAS 119017-37-7 (6588)
5,8,15,18,23-Pentaoxa-1,12-diazabicyclo[10.8.5]pentacosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl alc/w 25°C 95% M K1=3.12 1990LNa (98416) 262
Medium: 95% MeOH, 0.05 M Bu4NBr. For the 9,16-dihydroxy- analogue: K1 < 2
**********
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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | none | 25°C | 0 | U | IH | K1=3.55 | 1997ZIa (98423) | 263 |

DH(K1)=-36.2 kJ mol-1, DS=-53.3 J K-1 mol-1. In 95% v/v MeOH/H2O: K1=7.96; DH(K1)=-74.4, DS=-97.3

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | non-aq | 25°C | 100% | C | H | K1=6.43 | 1999WBa (98705) | 264 |

Medium: N,N-dimethylformamide. Method: competitive titration against Ag+, using Ag+ ISE. By calorimetry: DH(K1)=-59.3 kJ mol-1.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.05M | C | H | K1=5.7 | 1996BCh (98706) | 265 |

Medium: 0.05 M Et4NClO4. By calorimetry: DH(K1)=-51.0 kJ mol-1.

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | alc/w | 25°C | 80% | C | H | K1=7.10 | 1995KZa (98707) | 266 |

Medium: 80% v/v CH3OH/H2O. DH(K1)=-59.6 kJ mol-1, DS(K1)=-64.1 J K-1 mol-1

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | non-aq | 25°C | 100% | M | H | K1=8.39 | 1994BCd (98708) | 267 |

Medium: acetone. DH(K1)=-64.9 kJ mol-1, TDS=-17.2

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | oth/un | 25°C | 0.05M | M | | K1=9.10 | 1992BUb (98709) | 268 |

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | non-aq | 25°C | 100% | U | H | K1=9.65 | 1986BUb (98710) | 269 |

In CH3CN. DH=-71.6 kJ mol-1

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | alc/w | 25°C | 100% | U | H | K1=9.10 | 1986BUd (98711) | 270 |

In MeOH. DH=-72.7 kJ mol-1

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | nmr | non-aq | 25°C | 100% | U | | K1=12.32 | 1986CHc (98712) | 271 |

In CDCl3 saturated with D2O

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | non-aq | 25°C | 100% | U | H | | 1986DGa (98713) | 272 |

DH1 = -75.1 kJ mol-1. Medium: nitromethane

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | non-aq | 25°C | 100% | U | H | | 1985DGa (98714) | 273 |

Medium: propylene carbonate. DH1 = -68.2 kJ mol-1

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | non-aq | 25°C | 100% | U | H | | 1985DGa (98715) | 274 |

Medium: acetonitrile. DH1 = -70.2 kJ mol-1

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | non-aq | 25°C | 100% | M | | K1=10.30 | 1985DGb (98716) | 275 |

Medium: nitromethane

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | non-aq | 25°C | 100% | U | H | | 1984DGa (98717) | 276 |

Medium: N,N-dimethylformamide. DH1=-55.4 kJ mol-1; DS1=-56.9 J K-1 mol-1.
---
Rb+ cal non-aq 25°C 100% U H 1984DGa (98718) 277
Medium: DMSO. DH1=-59.2 kJ mol-1; DS1=-87.9 J K-1 mol-1
---
Rb+ ISE non-aq 25°C 100% U I K1=6.78 1981CRa (98719) 278
Medium: DMF. In DMSO: K1=5.85; in EtOH: 9.25; in N-methylpropionamide: 7.28
---
Rb+ ISE non-aq 25°C 100% U K1=9.0 1980CRa (98720) 279
Medium: Propylene carbonate
---
Rb+ con non-aq 25°C 100% U K1=>7 1980KMb (98721) 280
Medium: MeCN
---
Rb+ ISE alc/w 25°C 100% U K1=8.98 1978CSb (98722) 281
Medium: MeOH
---
Rb+ EMF oth/un 25°C 0.05M C I K1=4.3 1978YTa (98723) 282
Method: competition with Tl+, using Tl amalgam electrode.
Electrolyte not stated. In DMSO, 0.10 M: K1=5.7
---
Rb+ cal R4N.X 25°C 0.06M C IH 1976KLc (98724) 283
Medium: 0.057 M Me4NBr. Method: flow microcalorimetry. DH(K1)=-49.4 kJ
mol-1, DS(K1)=-83 J K-1 mol-1.In 95% (v/v) MeOH/H2O, DH(K1)=-82.0, DS=-115
---
Rb+ gl R4N.X 25°C 0.10M C H K1=4.06 1975ANa (98725) 284
Medium: Me4NCl. DH(K1)=-49.4 kJ mol-1, DS=-87.4
---
Rb+ gl R4N.X 25°C 0.05M C I K1=4.35 1975LSc (98726) 285
In 95% MeOH: K1=8.40
**********
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
---
Rb+ cal alc/w 25°C 100% U H K1=3.08 1990KMb (98784) 286
Medium: MeOH. DH=-11.0 kJ mol-1
**********
C18H36O9 L 27-Crown-9 (7043)
1,4,7,10,13,16,19,22,25-Nonaoxacycloheptacosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sol non-aq 25°C 100% C K1=4.02 1999KCa (98810) 287
Medium: acetonitrile.
**********
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
-------------------------------------------------------------------------
Rb+        dis non-aq 25°C 100%  C        K1=8.50        1998KSc (98877) 288
Medium: 1,2-dichloroethane.
*************************************************************************
C19H27NO7               L                        (7048)
5'-(N-Acrylamide)-benzo-18-crown-6; CH2:CH.CO.NH.C16H23O6
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Rb+        sp  non-aq 25°C 100%  U        K1=7.08        1979KMb (99396) 289
Medium: CHCl3
*************************************************************************
C19H30O6                L                        (643)
2,3-Benzo-8,11,15-trimethyl-1,4,7,10,13,16-hexaoxacyclooctadeca-2-ene;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Rb+        con alc/w  25°C 100%  U        K1=3.37        1983LSa (99439) 290
Medium: MeOH
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        gl  R4N.X  25°C 0.10M U        K1=2.0         1978LMa (99496) 291
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  U        K1=1.5         1993EVa (99934) 292
Medium: THF+CHCl3 (4:1 vol)
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        oth oth/un 25°C 0.05M C        K1=1.19        2002KTa (100215) 293
Method: capillary electrophoresis. Medium: 0.03-0.06 M RbCl.
-------------------------------------------------------------------------
Rb+        dis non-aq 24°C 100%  C                       2002MRd (100216) 294
                                          K(Rb+A+L)=6.724
Medium: CDCl3. HA is picric acid.
-------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  C        K1=4.5         2000ICa (100217) 295
Medium: nitromethane.
```

---

Rb+ con non-aq 25°C 100% C T H K1=4.10 2000SSc (100218) 296
Medium: acetonitrile. Data for 15-45 C. DH(K1)=-8 kJ mol-1,
DS(K1)=50 J K-1 mol-1.

---

Rb+ dis oth/un 25°C 0.06M C 2000YYa (100219) 297
K(RbL+A)=1.00
K(Rb+L(org)+A=RbLA(org))=4.66
Method: extraction of metal picrate (0.06 M, pH 12) into dichloromethane/
ligand solution. HA: picric acid. Data for many additional solvents.

---

Rb+ oth alc/w 35°C 3.0% C K1=1.13 1999MTd (100220) 298
Method: capillary zone electrophoresis. Medium: 3% v/v EtOH/H20, 0.005 M
phosphate buffer, pH 7.0

---

Rb+ dis non-aq 25°C 100% U K1=8.20 B2=10.19 1998KSb (100221) 299
Medium: 1,2-dichloroethane

---

Rb+ oth oth/un 25°C 0.04M C K1=1.07 1998TIa (100222) 300
Method: capillary electrophoresis.
Medium: 0.005 M phosphate buffer, pH 7.1, 0.04 M MCl.

---

Rb+ nmr non-aq RT 100% U K1=2.38 1996GMc (100223) 301
Method: 133Cs nmr. Medium: N,N-dimethylformamide

---

Rb+ dis oth/un 25°C 0 U K1=4.13 1994OUa (100224) 302

---

Rb+ dis non-aq 23°C 100% C K1=5.5 1992HGb (100225) 303
Extraction of metal chloride (A) from aqueous solution into nitrobenzene/
0.01M Bu4NB(Ph)4. Peak potential voltammetry.

---

Rb+ sp non-aq 25°C 100% U K1=2.65 1991NTa (100226) 304
Medium: DMF

---

Rb+ nmr non-aq 25°C 100% U K1=3.32 1991SKa (100227) 305
Medium: MeCN

---

Rb+ vlt non-aq 25°C 100% U K1=8.3 1990SPa (100228) 306
Medium: 1,2-dichloroethane

---

Rb+ cal non-aq 25°C 100% C H 1988BUb (100229) 307
Medium: acetonitrile. DH(K1)=-12.0 kJ mol-1, DS(K1)=30 J K-1 mol-1.

---

Rb+ cal non-aq 25°C 100% C H K1=4.36 1986ICa (100230) 308
Medium: MeOH. DH(K1)=-28.6 kJ mol-1, DS(K1)=-12.5 J K-1 mol-1.

---

Rb+ vlt non-aq 25°C 100% U I K1=3.70 1978HKc (100231) 309
Medium: CH3CN, 0.05M Bu4NClO4

---

Rb+ nmr non-aq 29°C 100% U K1=2.89 1977SZa (100232) 310

Medium: DMF

---

Rb+ dis non-aq 25°C 100% C T HM 1975SIc (100233) 311
K(Rb+A+L(org)=RbAL(org))=3.75
K(Rb+A+2L(org)=RbAL2(org))=6.5
K(RbAL+L)=2.7
Method: Extraction from H2O into benzene. HA is picric acid. DH(RbAL(org))
=-68.6 kJ mol-1, DS(RbAL(org))=-158 J K-1 mol-1.

---

Rb+ sol none 25°C 0.0 U I K1=1.08 1975SNa (100234) 312

**********

C20H24O6 L CAS 72011-24-6 (8872)
2,3:5,6-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,5-diene;

---

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

---

Rb+ dis non-aq 23°C 100% C K1=5.8 1992HGb (100264) 313
K(Rb+A+L(org)=RbAL(org))=5.28
Extraction of metal chloride (A) from aqueous solution into nitrobenzene/
0.01M Bu4NB(Ph)4. Peak potential voltammetry.

**********

C20H24O6 L CAS 14262-61-4 (8871)
2,3:8,9-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,8-diene;

---

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

---

Rb+ sp non-aq 25°C 100% C K1=>1.74 2002YEa (100273) 314
Method: fluorescence spectroscopy. Medium: acetonitrile.

---

Rb+ dis non-aq 23°C 100% C K1=4.1 1992HGb (100274) 315
Extraction of metal chloride (A) from aqueous solution into nitrobenzene/
0.01M Bu4NB(Ph)4. Peak potential voltammetry.

**********

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

---

Rb+ dis non-aq 25°C 100% U H 1979KLa (100350) 316
K(Rb(picrate)+L)=7.05
Medium: CHCl3

**********

C20H31N2O4F L CAS 173417-87-3 (6461)
26-Fluoro-4,7,13,16-tetraoxa-1,10-diazatricyclo[8.8.7.1,20,24]hexacosa-20,22,24(26)
-triene;

---

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

---

Rb+ EMF non-aq 25°C 100% C H K1=4.99 1999BHa (100442) 317
Medium: MeOH, 0.05 M Et4NClO4. By calorimetry DH(K1)=-45.1 kJ mol-1.

Method: by competition with Ag+, using Ag/Ag+ electrode
**********
C20H32N2O4 L CAS 61696-66-0 (6497)
4,7,13,16-Tetraoxa-1,10-diazatricyclo[8.8.7.1,20,24]hexacosa-20,22,24(26)-triene;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ EMF mixed 25°C 100% C H K1=4.68 1999BHa (100459) 318
Medium: MeOH, 0.05 M Et4NClO4. By calorimetry DH(K1)=-44.3 kJ mol-1
Method: by competition with Ag+, using Ag/Ag+ electrode.
**********
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
---
Rb+ sp non-aq 22°C 100% U K1=5.91 1987CCc (100499) 319
In deuterochloroform
**********
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
---
Rb+ dis non-aq 25°C 100% U K1=10.43 2000KSa (100698) 320
Medium: 1,2-dichloroethane
---
Rb+ con non-aq 25°C 100% C T H K1=>5.5 2000SSc (100699) 321
Medium: acetonitrile. Data for 15-45 C. DH(K1)=-17 kJ mol-1,
DS(K1)=46 J K-1 mol-1.
---
Rb+ nmr non-aq RT 100% U K1=3.70 1996GMc (100700) 322
Method: 133Cs nmr. Medium: N,N-dimethylformamide
---
Rb+ nmr non-aq 25°C 100% U K1=4.47 1991SKa (100701) 323
In acetonitrile.
---
Rb+ cal non-aq 25°C 100% C H K1=6.05 1988BUb (100702) 324
Medium: acetonitrile. DH(K1)=-24.5 kJ mol-1, DS(K1)=33 J K-1 mol-1.
---
Rb+ con none 25°C 0.0 C T H K1=4.67 1988TMc (100703) 325
Data for 15-35 C. DH(K1)=-47.7 kJ mol-1, DS(K1)=-71.4 J K-1 mol-1.
Anion is tetraphenyl borate.
---
Rb+ dis non-aq 25°C 100% U H 1979KLa (100704) 326
K(Rb(picrate)+L)=6.70
Medium: CHCl3
---
Rb+ cal oth/un 40°C 0.0 U T K1=0.86 1971INa (100705) 327
Isomer B. K1(10 C)=0.95, K1(25 C)=0.87. For isomer A: K1=1.61(10 C),

1.52(25 C), 1.40(40 C)
---
Rb+ cal oth/un ? 0.01M U K1=1.47 1969IRa (100706) 328
Data for isomer A
**********
C20H38N2O6 L CAS 178822-46-3 (8615)
6-Methylene-4,8,14,17,22,25-hexaoxa-1,11-diazabicyclo[9.8.8]heptacosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ cal alc/w 25°C 80% C H K1=5.70 1995KZa (100741) 329
Medium: 80% v/v CH3OH/H2O. DH(K1)=-51.0 kJ mol-1, DS(K1)=-62.1 J K-1 mol-1
**********
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
---
Rb+ gl non-aq 25°C 100% C I K1=3.85 1992LSc (100778) 330
Medium: MeCN, 0.05 M Et4NClO4. In DMF K1=2.2; in H2O K1<2
**********
C20H40N2O6 L Cryptand 2,2,2H (6606)
1,10-Diaza-4,7,14,17,23,26-Hexaoxabicyclo[10.8.8]octacosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl alc/w 25°C 95% M K1=5.14 1990LNa (100787) 331
Medium: 95% MeOH, 0.05 M Bu4NBr. For the 12,19-dihydroxy- analogue: K1=4.31
**********
C20H40N2O6 L Cryptand 3,2,1H (6589)
1,7-Diaza-4,11,14,17,23,26-hexaoxabicyclo[13.8.5]octacosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl alc/w 25°C 95% M K1=3.15 1990LNa (100796) 332
Medium: 95% MeOH, 0.05 M Bu4NBr. For the 9,19-dihydroxy- analogue: K1=3.25
**********
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
---
Rb+ ISE alc/w 25°C 95% C K1=7.3 1977LSc (100818) 333
Medium: 95% (w/w) MeOH/H2O, 0.1 M Et4NBr.
---
Rb+ cal R4N.X 25°C 0.06M C H 1976KLc (100819) 334
Medium: 0.057 M Me4NBr. Method: flow microcalorimetry.
DH(K1)=-18 kJ mol-1, DS(K1)=-20 J K-1 mol-1.
---
Rb+ cal R4N.X 25°C 0.06M C H 1976KLc (100820) 335

Medium: 0.057 M Me4NBr. Method: flow microcalorimetry.
DH(K1)=-25.9 kJmol-1, DS(K1)=28 J K-1 mol-1.

---

Rb+ gl R4N.X 25°C 0.05M C I K1=2.05 1975LSc (100821) 336
In 95% MeOH: K1=7.30; 100%: > 6

**********

C20H40O10 L 30-Crown-10 (7044)
1,4,7,10,13,16,19,22,25,28-Decaoxacyclotriacontane;

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sol | non-aq | 25°C | 100% | C | | K1=4.45 | 1999KCa | (100855) 337 |

Medium: acetonitrile.

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.10M | U | I | K1=2.3 | 1978LMa | (100892) 338 |

In CH3OH, K1>4.

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | non-aq | 25°C | 100% | C | I | K1=3.16 | 1997DMd | (100931) 339 |

Method: Ag electrode; competitive titration. Medium: acetonitrile, 0.05 M Et4NClO4. Also data for PC (K1=4.8), MeOH (3.4), DMF (3.56), 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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | non-aq | 25°C | 100% | U | I | K1=4.85 | 1996SDa | (100946) 340 |

Medium: MeCN, 0.05 M Et4NClO4. In MeOH: K1=3.0, DMF: 2.73,
propylene carbonate: 6.2

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.10M | C | | K1=<2.0 | 1993SFb | (100947) 341 |

Medium: 0.1 M Et4NClO4.

**********

C21H23NO9 L (6799)
2,3-(4'-(4"-Nitrophenoxycarbonyl))benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | kin | alc/w | 25°C | 54% | U | | K1=0.30 | 1991HHb | (101225) 342 |

Medium: 54% w/w EtOH/H2O

**********
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
---
Rb+ gl alc/w 25°C 80% M H K1=2.81 1985AEb (101270) 343
Medium: 80% w/w MeOH/H2O, pH=11. By calorimetry: DH(K1)=-15.9 kJ mol-1,
DS(K1)=0.7 J K-1 mol-1.
**********
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
---
Rb+ gl alc/w 25°C 95% C K1=4.22 2004KVa (101466) 344
Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.
**********
C22H25N5O14 L CAS 74305-50-3 (2797)
4'-Picrylamino-(2''-nitrobenzo)-18-crown-6
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp oth/un 25°C 0.10M U K1=1.32 1980NTa (101920) 345
At pH 12.35 in Li4(EDTA)
**********
C22H26N4O12 L CAS 74044-87-4 (2796)
4'-Picrylaminobenzo-18-crown-6
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp oth/un 25°C 0.10M U K1=1.52 1980NTa (101993) 346
K(Rb+HL)=1.20
At pH 11.5 in Li4(EDTA)
**********
C22H26O5 L CAS 160978-39-2 (8944)
o,o'-(Tetraethyleneglycoldiyl)-(Z)-stilbene;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con non-aq 25°C 100% C K1=3.49 2000ICa (102000) 347
Medium: nitromethane.
**********
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
---
Rb+ oth alc/w 35°C 3.0% C K1=1.67 1999MTd (102057) 348
Method: capillary zone electrophoresis. Medium: 3% v/v EtOH/H20, 0.005 M

phosphate buffer, pH 7.0

---

Rb+ dis oth/un 25°C 0 U K1=4.45 1994OUa (102058) 349

---

Rb+ con non-aq 25°C 100% U K1=5.4 1993EVa (102059) 350

Medium: THF+CHCl3 (4:1 vol)

**********

C22H28O7 L CAS 133560-78-8 (8962)

2,3:17,18-Dibenzo-1,4,7,10,13,16,19-heptaoxacycloheneicosa-2,17-diene, Dibenzo[21]crown-7;

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | C | | K1=4.893 | 2002YEa (102069) | 351 |

Method: fluorescence spectroscopy. Medium: acetonitrile.

---

| Rb+ | sp | non-aq | 25°C | 100% | C | | K1=4.38 | 2002YEb (102070) | 352 |
|---|---|---|---|---|---|---|---|---|---|

Method: steady state fluorescence spectroscopy. Medium: acetonitrile.

**********

C22H30O4P2 L CAS 470454-09-2 (8993)

4,10-Dibenzyl-1,7-dioxa-4,10-diphosphacyclododecan-4,10-dioxide;

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 24°C | 100% | C | | K(Rb+A+L)=6.004 | 2002MRd (102133) | 353 |

Medium: CDCl3. HA is picric acid.

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.05M | U | H | K1=3.9 | 1998DBa (102280) | 354 |

Medium: 0.05 M Et4NClO4. By calorimetry: DH(K1)=-26.9 kJ mol-1,

---

| Rb+ | gl | oth/un | 25°C | 0.02M | U | H | K1=7.19 | 1980CKa (102281) | 355 |
|---|---|---|---|---|---|---|---|---|---|

DH=-57.7 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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 22°C | 100% | U | | K1=5.92 | 1987CCc (102302) | 356 |

In deuterochloroform

---

| Rb+ | vlt | alc/w | 25°C | 100% | U | | K1=3.78 | 1984ZBa (102303) | 357 |
|---|---|---|---|---|---|---|---|---|---|

Medium: MeOH, 0.1 M Et4NI

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | nmr | non-aq | 24°C | 100% | U | M | K(Rb(picrate)+L)=7.5 | 1981BEb (102374) | 358 |

Medium: CDCl3

**********

C22H40O7 L (6596)
2,3,11,12,-Dicyclohexano-1,4,7,10,13,16,19-heptaoxacycloheneicosane;
dicyclohexyl-21-crown-7;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sol | non-aq | 25°C | 100% | C | I | K1=4.88 | 1999KCa (102381) | 359 |

Medium: acetonitrile. In propylene carbonate, K1=4.25

**********

C22H44N2O7 L Cryptand 3,2,2H (6607)
1,10-Diaza-4,7,14,17,20,26,29-Heptaoxabicyclo[13.8.8]hentriacontane;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | alc/w | 25°C | 95% | M | | K1=5.08 | 1990LNa (102417) | 360 |

Medium: 95% MeOH, 0.05 M Bu4NBr. For the 12,22-dihydroxy- analogue: K1=4.03

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | alc/w | 25°C | 100% | C | I | K1=6.15 | 1975LSc (102431) | 361 |

Medium: MeOH

**********

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-dithione;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | alc/w | 25°C | 95% | C | | K1=3.04 | 2004KVa (102441) | 362 |

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

**********

C22H46N4O8 L CAS 61136-93-4 (8201)
7,9-Dimethyl-4,10,16,22,27-pentaoxa-1,7,13,19-tetraazabicyclo[11.11.5]nonacosane;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | R4N.X | 25°C | 0.10M | U | | K1=1.32 | 1982GKc (102462) | 363 |

Medium: 0.10 M NMe4NO3.

**********
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
---
Rb+ gl alc/w 25°C 100% U K1=>4 1978LMa (102491) 364
**********
C24H20B- HL CAS 4358-26-3 (2489)
Tetraphenylborate;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sol alc/w 25°C 50% C I 1983BWb (102906) 365
Kso(RbB(C6H5)4)=-7.36
Method: spectrophotometry. Data for 20-100% MeOH/H2O
---
Rb+ con non-aq 25°C 100% U K1=0.78 1978CAa (102907) 366
Medium: Acetonitrile
---
Rb+ con non-aq 25°C 100% U K1=0.8 1975YKa (102908) 367
Medium: MeCN
**********
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
---
Rb+ con non-aq 25°C 100% U K1=4.7 1989BEa (102940) 368
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
**********
C24H24O6 L CAS 99700-19-3 (8873)
2,3:5,6:8,9-Tribenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,5,8-triene;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 23°C 100% C K1=4.6 1992HGb (102955) 369
Extraction of metal chloride (A) from aqueous solution into nitrobenzene/
0.01M Bu4NB(Ph)4. Peak potential voltammetry.
**********
C24H24O6 L TriBz18-Crown-6 (6069)
2,3:8,9:11,12-Tribenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,8,11-triene;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 23°C 100% C K1=4.5 1992HGb (102961) 370
Extraction of metal chloride (A) from aqueous solution into nitrobenzene/
0.01M Bu4NB(Ph)4. Peak potential voltammetry.
**********
C24H30O8 L CAS 67655-22-5 (8710)

7,8,16,17-Tetrahydro-7,16-(epoxyethanoxyethanoxyethanoxy)-6H,15H-dibenzotetraoxacyc
lotetradecin;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ ISE none 25°C 0.0 C K1=3.8 1978PAa (103036) 371
Method: Rb-sensitive electrode.
**********
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
---
Rb+ dis non-aq 25°C 100% U H 1979KLa (103074) 372
K(Rb(picrate)+L)=6.28
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
---
Rb+ dis non-aq 25°C 100% U H 1979KLa (103080) 373
K(Rb(picrate)+L)=3.38
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
---
Rb+ dis non-aq 25°C 100% U H 1979KLa (103086) 374
K(Rb(picrate)+L)=5.26
Medium: CHCl3
**********
C24H32O8 L (5617)
2,3:11,12-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracosa-2,11-diene;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ oth alc/w 25°C 100% U K1=3.8 1980WAa (103089) 375
Medium: MeOH
**********
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
---

Rb+ oth oth/un 25°C 0.05M C K1=0.83 2002KTa (103166) 376
Method: capillary electrophoresis. Medium: 0.03-0.06 M RbCl.
---
Rb+ sp non-aq 25°C 100% C K1=3.87 2002YEb (103167) 377
Method: steady state fluorescence spectroscopy. Medium: acetonitrile.
---
Rb+ con non-aq 25°C 100% C T H K1=3.98 2000SSc (103168) 378
Medium: acetonitrile. Data for 15-45 C. DH(K1)=-23 kJ mol-1,
DS(K1)=-2 J K-1 mol-1.
---
Rb+ oth alc/w 35°C 3.0% C K1=1.49 1999MTd (103169) 379
Method: capillary zone electrophoresis. Medium: 3% v/v EtOH/H20, 0.005 M
phosphate buffer, pH 7.0.
---
Rb+ nmr non-aq RT 100% U K1=1.74 1996GMc (103170) 380
Method: 133Cs nmr. Medium: N,N-dimethylformamide
---
Rb+ dis oth/un 25°C 0 U K1=3.80 1994OUa (103171) 381
---
Rb+ con non-aq 25°C 100% U K1=5.2 1993EVa (103172) 382
Medium: THF+CHCl3 (4:1 vol)
---
Rb+ nmr non-aq 25°C 100% U K1=3.94 1991SKa (103173) 383
In acetonitrile.
---
Rb+ vlt non-aq 25°C 100% U K1=9.4 1990SPa (103174) 384
Medium: 1,2-dichloroethane
---
Rb+ vlt alc/w 25°C 100% U K1=3.83 1985ZBa (103175) 385
Medium: MeOH
---
Rb+ vlt alc/w 25°C 100% U K1=3.76 1984ZBa (103176) 386
Medium: MeOH, 0.1 M Et4NI
---
Rb+ dis non-aq 35°C 100% U I K1=3.5 1980TYb (103177) 387
Medium: propylene carbonate
---
Rb+ cal alc/w 25°C 70% U H K1=2.55 1976ITa (103178) 388
Medium: 70% w/w MeOH/H2O. DH(K1)=-36.5 kJ mol-1
**********
C24H32O8 L CAS 75832-82-5 (5618)
2,3:8,9-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracosa-2,8-diene;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp non-aq 25°C 100% C K1=3.865 2002YEa (103187) 389
Method: fluorescence spectroscopy. Medium: acetonitrile.
---
Rb+ oth alc/w 25°C 100% U K1=4.2 1980WAa (103188) 390
Medium: MeOH

**********
C24H34O5P2 L CAS 470454-11-6 (8994)
7,13-Dibenzyl-1,4,10-trioxa-7,13-diphosphacyclopentan-7,13-dioxide;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 24°C 100% C 2002MRd (103234) 391
K(Rb+A+L)=6.28
Medium: CDCl3. HA is picric acid.
**********
C24H34O7 L CAS 20740-88-9 (5612)
1,17-Diphenoxy-3,6,9,12,15-pentaoxaheptadecane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl alc/w 25°C 100% M K1=1.51 1976FAa (103236) 392
**********
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
---
Rb+ con non-aq 25°C 100% U K1=3.4 1989EVa (103298) 393
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
**********
C24H42N2O6 L CAS 129242-36-0 (8616)
6,16,25-Tris(methylene)-4,8,14,18,23,27-hexaoxa-1,11-diazabicyclo[9.9.9]nonacosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ cal alc/w 25°C 80% C H K1=2.49 1995KZa (103356) 394
Medium: 80% v/v CH3OH/H2O. DH(K1)=-24.2 kJ mol-1, DS(K1)=-33.6 J K-1 mol-1
**********
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
---
Rb+ sp non-aq 22°C 100% U K1=6.64 1987CCc (103400) 395
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
---
Rb+ nmr non-aq 24°C 100% U M 1981BEb (103413) 396
K(Rb(picrate)+L)=6.3
Medium: CDCl3

**********
C24H44O8 L Dicy-24-crown-8 CAS 17455-23-1 (2401)
2,3,14,15-Dicyclohexyl-1,4,7,10,13,16,19,22-octaoxacyclotetracosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sol non-aq 25°C 100% C K1=4.84 1999KCa (103436) 397
Medium: acetonitrile. In propylene carbonate, K1=4.43
---
Rb+ nmr non-aq RT 100% U K1=2.66 1996GMc (103437) 398
Method: 133Cs nmr. Medium: N,N-dimethylformamide
**********
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
---
Rb+ gl alc/w 25°C 100% C I K1=5.75 1975LSc (103467) 399
Medium: MeOH
**********
C24H48N4O6 L CAS 56698-26-1 (1536)
4,10,16,22,27,32-Hexaoxa-1,7,13,19-tetraazatricyclo-tetratriacontane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl R4N.X 25°C 0.10M U K1=4.22 1982GKc (103490) 400
Medium: 0.10 M NMe4NO3.
---
Rb+ gl R4N.X 25°C 0.10M U K1=3.4 1981GLa (103491) 401
---
Rb+ ISE non-aq 25°C 100% C K1=6.2 1977LSc (103492) 402
Medium: 0.10 M Et4NBr in MeOH.
**********
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
---
Rb+ gl alc/w 25°C 95% C K1=3.23 2004KVa (103508) 403
Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.
**********
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
---
Rb+ dis non-aq 20°C 100% C 1998DDc (103761) 404
K(RbP+L)=4.49

Medium: CHCl3. P is picrate.
**********
C25H40O12 L CAS 239470-22-5 (8948)
4'-Carboxybenzo-30-crown-10;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con non-aq 25°C 100% C T H K1=5.06 1999RGa (103777) 405
Medium: acetonitrile. Data for 5-35 C. DH(K1)=-55.0 kJ mol-1, DS(K1)=
-87 J K-1 mol-1.
**********
C25H50N4O5 L CAS 61136-92-3 (1535)
Pentaoxa-4,10,16,22,27-tetraaza-1,7,13,19-tricyclo-tetratriacontane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl R4N.X 25°C 0.10M U K1=3.3 1981GLa (103837) 406
**********
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
---
Rb+ gl alc/w 25°C 95% C K1=5.59 2004KVa (103847) 407
Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.
**********
C26H24O2P2 L (6648)
Bis(diphenylphosphinyl)ethane; (C6H5)2PO.CH2CH2.PO(C6H5)2
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con non-aq 25°C 100% U K1=1.6 1990EAb (103914) 408
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
---
Rb+ con non-aq 25°C C K1=2.4 1999TEa (103923) 409
In: tetrahydrofurane/CHCl3 4:1 v/v
---
Rb+ oth non-aq 25°C 100% U K1=2.4 1995TEa (103924) 410
Medium: tetrahydrofurane:CHCl3 4:1 (v/v).
Metal ion is used as 2,4-dinitrophenolate.
**********
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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | C | | K1=4.34<br>K(RbL+Rb)=1.97 | 2003GHa (104077) | 411 |

Method: fluorescence spectroscopy. Medium: acetonitrile, 0.05 M Et4NClO4.

**********

C26H34O9 L CAS 67655-23-6 (8711)
7,8,16,17-Tetrahydro-7,16-(epoxyethanoxyethanoxyethanoxyethanoxy)-dibenzotetraoxacyclotetradecin;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | none | 25°C | 0.0 | C | | K1=4.4 | 1978PAa (104110) | 412 |

Method: Rb-sensitive electrode.

**********

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-diene;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | cal | non-aq | 25°C | 100% | U | IH | | 1988DSa (104143) | 413 |

Medium: MeCN. DH(K1)=-60.7 kJ mol-1. Also data in propylene carbonate, dimethylformamide and dimethylsulphoxide

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | ISE | non-aq | 25°C | 100% | U | M | K1=4.32 | 1987DSa (104144) | 414 |

Medium: N,N-dimethylformamide

**********

C26H36O9 L CAS 518019-36-8 (8969)
2,3:11,12-Dibenzo-1,4,7,10,13,16,19,22,25-nonaoxacycloseptacosa-2,11-diene;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | C | | K1=2.81 | 2002YEb (104165) | 415 |

Method: steady state fluorescence spectroscopy. Medium: acetonitrile.

**********

C26H38O6P2 L CAS 470454-13-8 (8995)
7,16-Dibenzyl-1,4,10,13-tetraoxa-7,16-diphosphacyclooctadecane-7,16-dioxide;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 24°C | 100% | C | | K(Rb+A+L)=6.24 | 2002MRd (104215) | 416 |

Medium: CDCl3. HA is picric acid.

**********

C26H38O8 L CAS 20740-89-0 (5613)
1,20-Diphenoxy-3,6,9,12,15,18-hexaoxaeicosane;

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

Rb+ gl alc/w 25°C 100% M K1=1.90 1976FAa (104217) 417
**********
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
---
Rb+ con non-aq 25°C 100% U K1=4.2 1989EVa (104246) 418
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
---
Rb+ dis none 25°C dil C K1=8.20 1987BBf (104282) 419
K(Rb+A+L(org)=RbAL(org))=5.87
Method: extraction of metal picrate from H2O into CHCl3.
**********
C26H48N2O6 L (6003)
5,6,14,15-Dicyclohexyl-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
---
Rb+ EMF alc/w 25°C 100% U H K1=5.65 1987BUb (104297) 420
In MeOH. DH=-34.3 kJ mol-1
**********
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
---
Rb+ nmr non-aq 24°C 100% U M 1981BEb (104313) 421
K(Rb(picrate)+L)=6.8
Medium: CDCl3
**********
C26H52N4O5 L CAS 78648-22-3 (1534)
4,10,16,22,33-Pentaoxa-1,7,13,19-tetraazatricyclo[11,11,6,5(7.19)pentatriacontane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl R4N.X 25°C 0.10M U K1=3.32 1982GKc (104331) 422
Medium: 0.10 M NMe4NO3.
---
Rb+ gl R4N.X 25°C 0.10M U K1=<2 1981GLa (104332) 423
**********
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
---
Rb+ gl alc/w 25°C 95% C K1=4.71 2004KVa (104342) 424
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
---
Rb+ gl alc/w 25°C 95% C K1=3.07 2004KVa (104352) 425
Medium: 95% MeOH/H2O, 0.01 M Et4NClO4.
**********
C27H26O2P2 L (6811)
1,2-Bis(2-Diphenylphosphinyl)-1-methylethane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con non-aq 25°C 100% U K1=1.2 1990EAb (104399) 426
For Cs LogK1 < 1. 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
---
Rb+ con non-aq 25°C 100% U K1=1.5 1990EAb (104404) 427
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
---
Rb+ oth non-aq 25°C 100% U K1=2.6 1995TEa (104409) 428
Medium: tetrahydrofurane:CHCl3 4:1 (v/v).
Metal ion is used as 2,4-dinitrophenolate.
**********
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
---
Rb+ con non-aq 25°C 100% U K1=4.6 1989BEa (104678) 429

Medium: tetrahydrofuran/CHCl3 4:1 (volume)
**********
C28H24O6 L TetBz18-Crown-6 CAS 99700-20-6 (6070)
2,3:8,9:11,12:14,15-Tetrabenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,8,11,14-tetrae
ne
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 23°C 100% C K1=3.8 1992HGb (104684) 430
Extraction of metal chloride (A) from aqueous solution into nitrobenzene/
0.01M Bu4NB(Ph)4. Peak potential voltammetry.
**********
C28H24O6 L CAS 72011-26-8 (8874)
2,3:8,9:11,12:17,18-Tetrabenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,8,11,17-tetrae
ne;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 23°C 100% C K1=3.4 1992HGb (104689) 431
Extraction of metal chloride (A) from aqueous solution into nitrobenzene/
0.01M Bu4NB(Ph)4. Peak potential voltammetry.
**********
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
---
Rb+ con non-aq 25°C 100% U K1=4.4 1993EVa (104717) 432
Medium: THF+CHCl3 (4:1 vol)
---
Rb+ con non-aq 25°C 100% U K1=2.3 1992BEa (104718) 433
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
---
Rb+ con non-aq 25°C C K1=2.9 1999TEa (104724) 434
In: tetrahydrofurane/CHCl3 4:1 v/v
**********
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
---
Rb+ con non-aq 25°C 100% U K1=5.6 1989BEa (104752) 435
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
**********
C28H40O6 L CAS 29471-17-8 (1262)

2,3:11,12-Bis(4'-tert-butylbenzo)-1,4,7,10,13,16-hexaoxacyclooctadecane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con alc/w 25°C 100% U I M 1979BDa (104849) 436
K(RbCl+L)=4.07
Medium: MeOH. In DMSO: K(RbClO4+L)=3.35. In MeCN: K(RbBPh4+L)=4.09
**********
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
---
Rb+ dis non-aq 25°C 100% U H 1979KLa (104860) 437
K(Rb(picrate)+L)=3.77
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
---
Rb+ con non-aq 25°C 100% C T H K1=4.64 2000SSc (104902) 438
Medium: acetonitrile. Data for 15-45 C. DH(K1)=-33 kJ mol-1,
DS(K1)=-21 J K-1 mol-1.
---
Rb+ nmr non-aq RT 100% U K1=1.52 1996GMc (104903) 439
Method: 133Cs nmr. Medium: N,N-dimethylformamide
---
Rb+ dis oth/un 25°C 0 U K1=4.62 1994OUa (104904) 440
---
Rb+ con non-aq 25°C 100% U I K1=5.60 1991ASb (104905) 441
Medium: 1,2-dichlorethane. In nitromethane: K1=5.26; in MeCN: K=4.76;
in acetone: K=4.26
---
Rb+ vlt non-aq 25°C 100% U K1=11.1 1990SPa (104906) 442
Medium: 1,2-dichloroethane
**********
C28H42O9 L CAS 97583-32-9 (5614)
1,13-Diphenoxy-3,6,9,12,15,18,21-heptaoxatricosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl alc/w 25°C 100% M K1=2.36 1976FAa (104931) 443
**********
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

---
Rb+ con non-aq 25°C 100% U K1=4.9 1989EVa (104948) 444
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
---
Rb+ nmr non-aq 24°C 100% U M 1981BEb (105013) 445
K(Rb(picrate)+L)=4.5
Medium: CDCl3
**********
C28H52O10 L CAS 17455-26-4 (6071)
2,3:17,18-Dicyclohexyl-1,4,7,10,13,16,19,22,25,28-decaoxacyclotriacontane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sol non-aq 25°C 100% C I K1=4.75 1999KCa (105023) 446
Medium: acetonitrile. Also K1=4.25 (propylene carbonate), K1=5.09 (i-PrOH) K1=5.30 (n-BuOH).
**********
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
---
Rb+ gl alc/w 25°C 95% C K1=4.74 2004KVa (105043) 447
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
---
Rb+ gl alc/w 25°C 95% C K1=3.00 2004KVa (105053) 448
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
---
Rb+ oth non-aq 25°C 100% U K1=2.3 1995TEa (105082) 449
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
---
Rb+ oth non-aq 25°C 100% U K1=2.3 1995TEa (105087) 450
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
---
Rb+ con non-aq 25°C C K1=3.2 1999TEa (105092) 451
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
---
Rb+ sp mixed 25°C 90% C 1997KKa (105104) 452
K(RbSCN+L)=4.18
Method: fluorescence emission. Medium: MeOH/CHCl3 (9:1 v/v).
**********
C29H40N2O6Cl2 L CAS 181706-77-4 (8627)
3,18-Dichlorooctahydro-5H,16H-6,15-(ethanoxyethanoxyethano)-dibenzotetraoxaazacyclo
heneicosine;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ cal non-aq 25°C 100% C H K1=3.92 1998ZBc (105139) 453
Medium: MeOH. DH(K1)=-35.9 kJ mol-1, DS(K1)=-45.3 J K-1 mol-1.
**********
C30H30N20O10 L CAS 259886-49-2 (8959)
Cucurbit[5]uril;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sol none 25°C dil C K1=1.01 2001BCf (105219) 454
Method: dissolution of ligand in a 0.002-0.02 M RbX solution; spectrophoto
metric measurement. For decamethylcucurbit[5]uril, K1=0.92.
**********
C30H32O4P2 L (6816)
1,8-Bis(diphenylphosphinyl)-3,6-dioxaoctane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con non-aq 25°C 100% U K1=2.9 1992BEa (105233) 455

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
---
Rb+ con non-aq 25°C C K1=3.5 1999TEa (105238) 456
In: tetrahydrofurane/CHCl3 4:1 v/v
**********
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
---
Rb+ sp non-aq 25°C 100% U K1=2.1 1996AAb (105257) 457
Medium: MeCN
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
---
Rb+ dis non-aq 25°C 100% U H 1979KLa (105264) 458
K(Rb(picrate)+L)=7.66
Medium: CHCl3
**********
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
---
Rb+ nmr non-aq 25°C 100% U K1=<7.06 1986CHc (105275) 459
In CDCl3
**********
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
---
Rb+ con non-aq 25°C 100% U K1=5.4 1989EVa (105346) 460
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
-------------------------------------------------------------------------
Rb+        oth non-aq 25°C 100%  U        K1=2.2         1995TEa (105528) 461
Medium: THF:CHCl3 4:1 v/v. Rb as 2,4-dinitrophenolate. Also other         si
milar ligands
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  U        K1=3.5         1992BEa (105648) 462
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
-------------------------------------------------------------------------
Rb+        con non-aq 25°C       C        K1=4.2         1999TEa (105653) 463
In: tetrahydrofurane/CHCl3 4:1 v/v
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  U        K1=4.7         1989BEa (105779) 464
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
*************************************************************************
C32H46N2O8Cl2          L                     CAS 181706-75-2  (8626)
3,18-Dichlorododecahydro-5H,16H-6,15-(ethanoxyethanoxyethano)dibenzohexaoxadiazacyc
lohexacosine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Rb+        cal non-aq 25°C 100%  C   H    K1=4.31        1998ZBc (105789) 465
Medium: MeOH. DH(K1)=-46.3 kJ mol-1, DS(K1)=-72.8 J K-1 mol-1.
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  U        K1=5.3         1989EVa (105826) 466
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
*************************************************************************
C32H64N4O10            L                     CAS 42133-16-4  (8579)
4,10,13,19,25,28,33,36,41,44-Decaoxa-1,7,16,22-tetraazatricyclo[20.8.8.87,16]hexate
```

tracontane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ ISE alc/w 25°C 95% C K1=3.7 1977LSc (105853) 467
K(RbL+Rb)=3.3
Medium: 95% (w/w) MeOH/H2O, 0.1 M Et4NBr.
**********
C32H66N2O4 L 22DD Kryptofix CAS 79495-97-9 (6655)
1,10-Didecyl-1,10-diaza-4,7,13,16-tetraoxacyclooctadecane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ cal alc/w 25°C 100% U H 1986BUd (105865) 468
In MeOH. DH=-34.4 kJ mol-1
**********
C33H41N3O6Cl2 L CAS 181706-78-5 (8628)
3,18-Dichlorohexahydro(ethanoxyethanoxyethano)-23,27-nitrilodibenzotetraoxadiazacyc
lopentacosine;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ cal non-aq 25°C 100% C H K1=4.03 1998ZBc (105929) 469
Medium: MeOH. DH(K1)=-23.2 kJ mol-1, DS(K1)=-0.67 J K-1 mol-1.
**********
C33H46N2O12 L (7049)
1,4-Diaza-1,4-di(5'-benzo-15-crown-5)-hepta-2,6-dione; CH2(CH2CONH.C14H19O5)2
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp non-aq 25°C 100% U K1=8.57 1979KMb (105983) 470
Medium: CHCl3
**********
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
---
Rb+ con non-aq 25°C 100% U K1=4.4 1992BEa (106046) 471
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
---
Rb+ con non-aq 25°C C K1=4.6 1999TEa (106053) 472
In: tetrahydrofurane/CHCl3 4:1 v/v
**********
C34H42N2O6Cl2 L CAS 181706-79-6 (8629)

3,18-Dichlorooctahydro-5H,16H-6,15-(ethanoxyethanoxyethano)tribenzotetraoxadiazacyc
lodocosine;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ cal non-aq 25°C 100% C H K1=4.68 1998ZBc (106060) 473
Medium: MeOH. DH(K1)=-23.7 kJ mol-1, DS(K1)=10.1 J K-1 mol-1.
**********
C34H53O8Br H2L CAS 38784-08-6 (2336)
5-Bromolasalocid;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl alc/w 25°C 100% M H 1988PJa (106101) 474
K(Rb+HL)=3.55
Also used Rb+ sensitive glass electrode. DH = -11.7 kJ mol-1; DS = 30
**********
C34H54O8 H2L Lasalocid CAS 25999-20-6 (2335)
Lasalocid acid;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ nmr non-aq 20°C 100% C 1998MLa (106153) 475
K(Rb+HL)=1.2
Medium: CD3OD. Method: 13C nmr.
---
Rb+ dis oth/un 25°C 0.0 U K1=1.8 1992LPb (106154) 476
---
Rb+ gl alc/w 25°C 100% M H 1988PJa (106155) 477
K(Rb+HL)=3.61
K(Rb+H2L)=1.6
Medium: MeOH. Also using Rb+ sensitive glass elect. DH=-13.2 kJ mol-1; DS=24
---
Rb+ gl alc/w 25°C 100% U 1982BDc (106156) 478
K(Rb+2HL)=3.39
Medium: MeOH
**********
C34H68N4O8 L CAS 49811-34-9 (8578)
10,13,25,28,33,36,41,44-Octaoxa-1,7,16,22-tetraazatricyclo[20.8.8.87,16]hexatetraco
ntane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ ISE alc/w 25°C 95% C K1=3.5 1977LSc (106183) 479
K(RbL+Rb)=3.0
Medium: 95% (w/w) MeOH/H2O, 0.1 M Et4NBr.
**********
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
-------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  U        K1=5.4         1989BEa (106222) 480
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
-------------------------------------------------------------------------
Rb+        sol none   25°C  dil  C        K1=2.98        2001BCf (106273) 481
Method: dissolution of ligand in a 0.002-0.02 M RbX solution;
spectrophotometric measurement.
-------------------------------------------------------------------------
Rb+        cal mixed  25°C  50%  C   H    K1=2.68        1998BJb (106274) 482
Medium: 50% (v/v) HCOOH/H2O. DH(K1)=-1.5 kJ mol-1.
-------------------------------------------------------------------------
Rb+        sp  none   25°C    0  U        K1=2.61        1994HKa (106275) 483
-------------------------------------------------------------------------
Rb+        sol none   25°C  0.0  U        K1=8.82        1992BCa (106276) 484
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        dis non-aq 25°C 100%  U   H                    1979KLa (106298) 485
                                        K(Rb(picrate)+L)=3.26
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
-------------------------------------------------------------------------
Rb+        dis non-aq 25°C 100%  U   H                    1979KLa (106304) 486
                                        K(Rb(picrate)+L)=3.94
Medium: CHCl3
*************************************************************************
C36H40O6                L    ANAN(MOM)2ANAN   CAS 1129-06-1  (2241)
Tetra(1,3-(2-methoxy-5-methylbenzo))-9,18-dioxacyclooctadeca-2,5,10,14-tetraene;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Rb+        dis non-aq 25°C 100%  U   H                    1979KLa (106309) 487
                                        K(Rb(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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=4.4 | 1992BEa (106341) | 488 |

Medium: THF+CHCl3 (4:1 vol)

**********

C36H44O8P2 L (7895)
1,18-Bis(diphenylphosphinyl)-hexaoxooctadecane;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | | C | | K1=5.2 | 1999TEa (106347) | 489 |

In: tetrahydrofurane/CHCl3 4:1 v/v

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | nmr | non-aq | 25°C | 100% | U | | K1=14.96 | 1986CHc (106381) | 490 |

In CDCl3

**********

C36H56O6 L CAS 54535-81-8 (1263)
2,3:11,12-Bis(3',5'-di-tert-butylbenzo)-1,4,7,10,13,16-hexaoxacyclooctadecane;

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | alc/w | 25°C | 100% | U | I M | K(RbCl+L)=3.23 | 1979BDa (106438) | 491 |

Medium: MeOH. In DMSO: K(RbClO4+L)=3.30. In MeCN: K(RbBPh4+L)=4.10

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | C | H | K1=2.23 | 1997PBb (106532) | 492 |

Medium: acetonitrile. Additional method: potentiometry with ISE.
By calorimetry, DH(K1)=-8 kJ mol-1, DS(K1)=15 J K-1 mol-1.

| Rb+ | ISE | alc/w | 25°C | 100% | M | | K1=4.28 | 1984CTa (106533) | 493 |

Medium: MeOH

| Rb+ | ISE | non-aq | 25°C | 100% | M | | K1=6.23 | 1984CTa (106534) | 494 |

Medium: N,N-dimethylformamide. In DMSO K1=4.32

| Rb+ | ISE | alc/w | 25°C | 100% | U | | K1=6.23 | 1984CTb (106535) | 495 |

Medium: EtOH

---
Rb+ gl alc/w 25°C 100% U K1=4.58 1978HPa (106536) 496
**********
C37H54N2O14 L (7050)
1,4-Diaza-1,4-di(5'-benzo-18-crown-6)-hepta-2,6-dione; CH2(CH2CONH.C16H23O6)2
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp non-aq 25°C 100% U K1=7.79 1979KMb (106634) 497
Medium: CHCl3
**********
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
---
Rb+ con non-aq 25°C 100% U K1=2.9 1993BEb (106645) 498
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
---
Rb+ con non-aq 25°C 100% U K1=3.3 1991EBa (106651) 499
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
---
Rb+ con non-aq 25°C 100% U K1=4.1 1993EVa (106662) 500
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
---
Rb+ con non-aq 25°C 100% U K1=5.0 1992BEa (106683) 501
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
---

Rb+ con non-aq 25°C C K1=5.0 1999TEa (106688) 502
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
---
Rb+ nmr non-aq 25°C 100% U K1=14.89 1986CHc (106693) 503
In CDCl3
**********
C39H50N2O16 L CAS 332843-42-2 (8210)
19,19'-(1,3-Propandiyl)bis(1,4,7,10,13,16-hexaoxacyclooctadecino[2,3]isoindole-18,20-dione;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp non-aq 25°C 100% C K1=3.1 2001OYa (106723) 504
Medium: methanol. For the 1,4-butanediyl- derivative, K1=3.2
**********
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
---
Rb+ con non-aq 25°C 100% U K1=2.9 1993BEb (106736) 505
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
---
Rb+ con non-aq 25°C 100% U K1=3.6 1991EBa (106748) 506
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
**********
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
---
Rb+ dis non-aq 22°C 100% C M 1996CPa (106774) 507
K(RbA+L(org)=RbAL(org))=9.29
Medium: CHCl3 saturated with H2O. Method: extraction of RbA into CHCl3/L solution. HA is picric acid. For the cone conformation, K=4.88.
**********
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
---
Rb+ sp non-aq 25°C 100% C K1=3.18 1995CUa (106779) 508
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-hexaoxacyclodocos
a-3,5-diene;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 25°C 100% U H 1979KLa (106798) 509
K(Rb(picrate)+L)=6.28
Medium: CHCl3
**********
C40H50N20O10 L CAS 143902-45-8 (8935)
Decamethylcucurbit[5]uril;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ cal mixed 25°C 50% C H K1=2.36 2000ZKb (106812) 510
Medium: 50% v/v formic acid/H2O. DH(K1)=-12.5 kJ mol-1, DS(K1)=3.4 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
---
Rb+ ISE non-aq 25°C 100% C K1=3.57 1998WLc (106825) 511
Medium: DMF, 0.05 M Et4NClO4.
**********
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-octao
xatetracosane;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ con non-aq 25°C 100% U K1=5.3 1989BEa (106830) 512
Medium: tetrahydrofuran/CHCl3 4:1 (volume)
**********
C40H60N2O10 n L CAS 84993-07-7 (667)
15,15'-Decamethylenedinitrilodimethylidyne-bis-(octahydro-1,4,7,10,13-benzopentaoxa
cyclopentadeci
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ kin alc/w 23°C 100% U K1=4.68 1982HLc (106833) 513

Medium: MeOH. Data also for nonamethylene(K=4.57) and tetramethylene(K=4.65) analogues

**********

C40H64O12 L Nonactin CAS 6833-84-7 (4179)
Nonactin

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | C | | K1=4.15 | 1977CEb (106858) | 514 |

Method: temperature jump relaxation. Medium: MeOH.

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | vlt | non-aq | 22°C | 100% | U | | K1=3.87 | 1974RKd (106859) | 515 |

Medium: 0.025 NBu4ClO4 in CH3CN

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | alc/w | 30°C | 100% | U | | K1=3.52 | 1973ZFa (106860) | 516 |

Method: vapour pressure osmometry. Medium: methanol.

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | dis | non-aq | 25°C | 100% | U | | | 1993HSa (106874) | 517 |

K(Pb(picrate)+L)=5.83

Medium: CDCl3

**********

C41H66O12 L Monactin CAS 7182-54-9 (4180)
Monactin

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | C | | K1=4.38 | 1977CEb (106897) | 518 |

Method: temperature jump relaxation. Medium: MeOH.

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | alc/w | 30°C | 100% | U | | K1=3.52 | 1973ZFa (106898) | 519 |

Method: vapour pressure osmometry. Medium: MeOH

**********

C42H40O4P2 L (7153)
1,2-Bis(2-(2-(diphenylphosphinyl)ethyl)phenoxy)ethane

---

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | non-aq | 25°C | 100% | U | | K1=2.1 | 1995TEa (106914) | 520 |

Medium: THF:CHCl3 4:1 v/v. Rb 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 |
|---|---|---|---|---|---|---|---|---|---|

```
--------------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  U        K1=2.7         1993BEb (106919) 521
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
--------------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  U        K1=3.4         1993BEb (106931) 522
Medium: THF+CHCl3   4:1(vol)
********************************************************************************
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
--------------------------------------------------------------------------------
Rb+        sp  non-aq 25°C 100%  C        K1=6.6         2000PBa (106955) 523
Medium: MeOH.
--------------------------------------------------------------------------------
Rb+        dis non-aq 22°C 100%  C    M                  1996CPa (106956) 524
                                          K(RbA+L(org)=RbAL(org))=9.41
Medium: CHCl3 saturated with H2O. Method: extraction of RbA into CHCl3/L
solution. HA is picric acid. For the cone conformation, K=<4.
********************************************************************************
C42H68O12               L                      CAS 20261-85-2  (5373)
Dinactin;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Rb+        sp  non-aq 25°C 100%  C        K1=4.62        1977CEb (106987) 525
Method: temperature jump relaxation. Medium: MeOH.
--------------------------------------------------------------------------------
Rb+        oth alc/w  30°C 100%  U        K1=3.62        1973ZFa (106988) 526
Method: vapour pressure osmometry. Medium: MeOH
********************************************************************************
C43H42O4P2              L                        (7156)
1,3-Bis((2-diphenylphosphinyl)phenoxy)propane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Rb+        oth non-aq 25°C 100%  U        K1=2.2         1995TEa (107002) 527
Medium: THF:CHCl3 4:1 v/v. Rb as 2,4-dinitrophenolate. Also other         si
milar ligands
********************************************************************************
C43H70O12               L                      CAS 7561-71-9  (5374)
Trinactin;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

Rb+ oth alc/w 30°C 100% U K1=3.85 1973ZFa (107034) 528
Method: vapour pressure osmometry. Medium: MeOH
**********
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
---
Rb+ con non-aq 25°C 100% U K1=2.2 1993BEb (107093) 529
Medium: THF+CHCl3 4:1(vol)
**********
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
---
Rb+ con non-aq 25°C 100% U K1=4.2 1993BEb (107112) 530
Medium: THF+CHCl3 4:1(vol)
**********
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
---
Rb+ oth non-aq 25°C 100% U K1=2.0 1995TEa (107123) 531
Medium: THF:CHCl3 4:1 v/v. Rb as 2,4-dinitrophenolate
**********
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
---
Rb+ gl non-aq 25°C 100% C K1=4.23 2000ABb (107146) 532
B(Rb2L)=7.44
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
---
Rb+ sp non-aq 25°C 100% C K1=3.6 1999USa (107161) 533
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
-------------------------------------------------------------------------
Rb+        sp  non-aq 25°C 100%  C  IH    K1=4.61        1996AAe (107167) 534
Medium: acetonitrile. By calorimetry, DH(K1)= -57 kJ mol-1, DS(K1)=-104
J K-1 mol-1. In 100% MeOH, K1=4.8, DH(K1)=-61, DS(K1)=-114.
*************************************************************************
C44H54O8               L                      CAS 162989-76-6  (8794)
1,3-Diisopropoxycalix[4]arene-crown-6, 1,3-alternate;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Rb+        sp  non-aq 25°C 100%  C        K1=5.8         2000PBa (107172) 535
Medium: MeOH.
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        EMF non-aq 25°C 100%  C        K1=5.96        1995CUa (107178) 536
Medium: methanol, 0.01 M Et4NClO4. Method: Ag-competitive potentiometry.
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        EMF non-aq 25°C 100%  C   H    K1=5.93        1995CUa (107184) 537
Medium: methanol, 0.01 M Et4NClO4. Method: Ag-competitive potentiometry.
By calorimetry, DH(K1)=-40 kJ mol-1, DS(K1)=-21 J K-1 mol-1.
*************************************************************************
C44H72N4O8             L                      CAS 61894-23-3  (8580)
7,16:25,34-Bis(ethanoxyethanoxyethano)dibenzo[1,4,17,20,7,14,23,30]tetraoxatetraaza
cyclodotriac..
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Rb+        kin alc/w  25°C  95%  C        K1=3.0         1977LSc (107195) 538
                                        K(RbL+Rb)=2.8
Medium: 90% (w/w) MeOH/H2O, 0.1 M Et4NBr. In H2O, K1=ca.1.5.
*************************************************************************
C46H40O6P2             L                        (6814)
1,2-Bis((2-(2-diphenylphosphinyl)phenoxy)ethoxy)benzene;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Rb+        con non-aq 25°C 100%  U        K1=4.4         1991EBa (107243) 539
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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | mixed | 25°C | 90% | C | | | 1997KKa (107253) | 540 |
| | | | | | | | K(RbSCN+L)=2.54 | | |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=4.5 | 1993BEb (107262) | 541 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | oth | non-aq | 25°C | 100% | U | | K1=2.5 | 1995TEa (107273) | 542 |

Medium: THF:CHCl3 4:1 v/v. Rb as 2,4-dinitrophenolate. Also other si
milar ligands

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | con | non-aq | 25°C | 100% | U | | K1=5.0 | 1993BEb (107367) | 543 |

Medium: THF+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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | gl | alc/w | 25°C | 100% | C | | K1=5.2 | 1993ABb (107406) | 544 |
| | | | | | | | B(Rb2L)=8.98 | | |
| | | | | | | | B(RbHL)=12.85 | | |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | C | IH | K1=4.41 | 1996AAe (107413) | 545 |

Medium: acetonitrile.By calorimetry, DH(K1)=-25.2 kJ mol-1, DS(K1)=0

J K-1 mol-1. In 100% MeOH, K1=4.3, DH(K1)=-52, DS(K1)=-92.
**********
C48H60O16 H4L (8251)
5,11,17,23-Tetrahydroxycalix[4]arene-bis(crown-6);
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp non-aq 25°C 100% C K1=5.45 2001PCa (107417) 546
Medium: methanol
**********
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
---
Rb+ gl alc/w 25°C 100% C K1=7.72 1993ABb (107493) 547
B(RbHL)=18.38
B(RbH2L)=27.76
B(RbH3L)=35.93
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
---
Rb+ sp non-aq 25°C 100% C H K1=2.0 1999USa (107501) 548
Medium: MeOH, 0.10 M Et4NCl. By calorimetry: DH(K1)=-27 kJ mol-1.
**********
C52H68N4O8 L (4823)
25,27-Bis(N,N-diethylaminocarbonylmethoxy)-26,28-bis(N-butylaminocarbonylmethoxy)ca
lix[4]arene;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp non-aq 25°C 100% C K1=<1 1999USa (107510) 549
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
---
Rb+ sp non-aq 25°C 100% C K1=3.25 2004BCb (107528) 550
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
-------------------------------------------------------------------------
Rb+        dis non-aq 22°C 100%  U        K1=8.04        1996SCa (107544) 551
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
-------------------------------------------------------------------------
Rb+        dis non-aq 25°C 100%  C        K1=11.7        1997DMc (107560) 552
Competitive extraction of Rb and 134Cs from H2O into nitrobenzene:
Rb+CsL(org)=RbL(org)+Cs. K1 is in nitrobenzene.
-------------------------------------------------------------------------
Rb+        dis non-aq 22°C 100%  C    M                   1996CPa (107561) 553
                                        K(RbA+L(org)=RbAL(org))=9.83
Medium: CHCl3 saturated with H2O. Method: extraction of RbA into CHCl3/L
solution. HA is picric acid.
-------------------------------------------------------------------------
Rb+        sp  alc/w  25°C 100%  U        K1=4.81        1972FEb (107562) 554
Medium: methanol/0.1M tetrabutyl-ammonium-perchlorate
*************************************************************************
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
-------------------------------------------------------------------------
Rb+        sp  non-aq 25°C 100%  C   H    K1=4.39        1996AAe (107580) 555
Medium: acetonitrile. By calorimetry, DH(K1)=-12.6 kJ mol-1, DS(K1)=42
J K-1 mol-1.
*************************************************************************
C56H72O8                L                     CAS 123311-74-0  (6160)
Tetramethyl-t-butylcalix[4]arenetetraketone;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Rb+        sp  alc/w  25°C 100%  U  I     K1=3.6         1989ACb (107600) 556
Medium: MeOH. In CH3CN, K1=1.7
*************************************************************************
C56H72O12               L                       (8751)
Tetramethyl-4-t-Butylcalix[4]arenetetraethanoate;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Rb+        EMF non-aq 25°C 100%  C  IH    K1=2.25        1995DGa (107604) 557
Medium: acetonitrile, 0.05 M Et4NClO4. Competitive method: Ag/Ag+
electrode. DH(K1)=-9.89 kJ mol-1, DS=-9.9. Also data in benzonitrile.
*************************************************************************
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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | C | | K1=3.5 | 1995CUa (107609) | 558 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | C | H | K1=3.32 | 2004BCb (107616) | 559 |

Medium: acetonitrile, 0.01 M Et4NClO4. By calorimetry: DH(K1)=-24.8 kJ mol-1, DS(K1)=-19.6 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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | alc/w | 25°C | 100% | C | | K1=2.7 | 2001MAa (107625) | 560 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | C | H | K1=2.92 | 2004BCb (107634) | 561 |

Medium: acetonitrile, 0.01 M Et4NClO4. DH(K1)=-17.9 kJ mol-1, DS(K1)=-4.2 J K-1 mol-1.

**********

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 |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | EMF | non-aq | 25°C | 100% | C | H | K1=2.05 | 1995DGa (107659) | 562 |

Medium: acetonitrile, 0.05 M Et4NClO4. Competitive method: Ag/Ag+ electrode. DH(K1)=-23.3 kJ mol-1, DS=-39. Also data for tetrabutyl deriv.

| Rb+ | sp | alc/w | 25°C | 100% | U | I | K1=3.1 | 1989ACb (107660) | 563 |
|---|---|---|---|---|---|---|---|---|---|

Medium: MeOH. In CH3CN, K1=1.9

**********

C60H82N2O10 L CAS 155377-20-1 (8806)

5,11,17,23-Tetra-butyl-25,27-bis(carboxymethoxy)-bis[(N,N-diethylaminocarbonyl)methoxy]calix[4]ar

---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl non-aq 25°C 100% C K1=3.78 2000ABb (107669) 564
B(Rb2L)=7.13
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
---
Rb+ sp non-aq 25°C 100% C K1=<1 1999USa (107682) 565
Medium: MeOH, 0.10 M Et4NCl
**********
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
---
Rb+ sp non-aq 25°C 100% C K1=3.9 1991ACc (107697) 566
Medium: acetonitrile, 0.01 M Et4NClO4.
**********
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
---
Rb+ sp non-aq 25°C 100% C H K1=5.5 1999LDa (107737) 567
B(Rb2L)=9.4
Medium: acetonitrile, 0.01 M Et4NClO4
By calorimetry, DH(K1)=-22.7 kJ mol-1, DH(Rb2L)=-46.1 kJ mol-1
**********
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
---
Rb+ con non-aq 25°C 100% U K1=2.7 1990EAb (107742) 568
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
---
Rb+ sp non-aq 25°C 100% C H K1=4.4 1996AAe (107747) 569
Medium: acetonitrile. By calorimetry, DH(K1)=-12.5 kJ mol-1, DS(K1)=42

J K-1 mol-1.
**********
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
---
Rb+ sp alc/w 25°C 100% U H K1=3.03 1996AAc (107771) 570
Medium MeOH, 0.1M Et4NCl. DH(K1)=-15.7 kJ mol-1, DS=5 J K-1 mol-1.
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
---
Rb+ sp non-aq 25°C 100% C K1=2.97 2004BCb (107779) 571
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
---
Rb+ EMF non-aq 25°C 100% C IH K1=2.67 1999DCa (107787) 572
Medium: acetonitrile, 0.05 M Bu4NClO4. Method: by competition with Ag+.
By calorimetry: K1=2.48, DH(K1)=-15.50 kJ mol-1, DS(K1)=-2.7 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
---
Rb+ cal alc/w 25°C 100% U H 1995ABc (107793) 573
Medium: 100% Methanol. DH(K1)=-11 kJ mol-1, DS(K1)=20 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
---
Rb+ sp alc/w 25°C 100% U K1=1.6 1989ACb (107797) 574
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

---
Rb+ sp non-aq 25°C 100% C K1=<1 1999USa (107807) 575
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
---
Rb+ cal alc/w 25°C 100% U IH 1995ABc (107820) 576
Medium: 100% Methanol. DH(K1)=-17.5 kJ mol-1, DS(K1)=13 J K-1 mol-1.
In acetonitrile, K1=5.7, DH(K1)=-37.2 kJ mol-1, DS(K1)=-17 J K-1 mol-1.
**********
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
---
Rb+ sp alc/w 25°C 100% C K1=4.8 2004MFa (107839) 577
Medium: MeOH, 0.01 M Et4NCl.
**********
C73H88O7 L Calixspherand CAS 154747-96-3 (7186)
2,26,31,41-Tetrakis(1,1-dimethylethyl)-45-ethoxy-35,38,44,46-tetramethoxy-9,14,19-t
rimethylcalix-
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ kin mixed 25°C 0 U 1994BHb (107854) 578
K(RbX+L)=9.64
Medium: CDCl3, saturated with H2O. X=picrate Data also for 2 analogues
calixspherands
**********
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
---
Rb+ EMF alc/w 25°C 100% U K1=5.6 1993BMa (107862) 579
Medium: MeOH, 0.1 M Et4NClO4.
**********
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
---
Rb+ sp non-aq 25°C 100% U K1=4.5 1989ACb (107874) 580
Medium: CH3CN
**********
C77H82O9 L CAS 253317-20-3 (9288)
p-Tert-butyldihomooxacalix[4]arene tetraphenyketone;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp alc/w 25°C 100% C I K1=3.7 1999MAb (107896) 581
Medium: MeOH, 0.01 M Et4NCl. In acetonitrile, K1=3.9.
**********
C78H90O10P2 L CAS 160638-26-6 (9130)
5,11,17,23-Tetra-t-butyl-bis(diethylcarbamoylmethoxy)-bis(diphenylphosphinoylmethox
y)calix[4]aren
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp alc/w 20°C 100% C K1=3.02 2003YVa (107902) 582
Medium: 100% EtOH, 0.01 M Et4NBr. Ligand is cone isomer. For paco isomer,
K=3.71. Also data for bis(diethyl ester) analogues.
**********
C80H112O24 L CAS 175349-59-4 (7498)
C-Heptylcalix[4]resorcinarene octa-alpha-(methyl ethanoate);
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 25°C 100% U 1995FDa (107906) 583
K=4.07
Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.
K: MA(org)+L(org)=MLA(org) where A=picrate.
**********
C85H80O15 L CAS 269057-77-4 (3302)
5,11,17,23,29-Pentabenzylcalix[5]arene-31,32,33,34,35-pentaethanoate pentamethyl
ester;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp non-aq 25°C 100% C I K1=5.5 2000AAa (107913) 584
Medium: methanol, 0.01 M Et4NCl. Also data for acetonitrile, 0.01 M Et4NCl
and for the pentaethyl ester.
**********
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
---
Rb+ EMF alc/w 25°C 100% U K1=5.8 1993BMa (107919) 585
Medium: MeOH, 0.1 M Et4NClO4.
**********
C88H78N2O12 L CAS 351183-45-4 (8252)
1,3-Calix[4]bis(10-cyano-9-anthrylmethyl-o-benzocrown-6);
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
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Rb+ sp mixed 25°C 50% C K1=6.3 2001JDa (107923) 586

K(RbL+Rb)=3.9
Medium: 50% v/v CH2Cl2/MeOH, 0.01 M benzyl(trimethyl)ammonium hydroxide.
Method: fluorescence spectroscopy.
**********
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
---
Rb+ cal non-aq 25°C 100% C K1=4.77 1997DZa (107946) 587
Medium: benzonitrile. DH(K1)=-29.66 kJ mol-1, DS(K1)=-8.2 J K-1 mol-1.
---
Rb+ sp non-aq 25°C 100% U I K1=4.8 1989ACb (107947) 588
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
---
Rb+ sp non-aq 25°C 100% C I K1=5.7 2000AAa (107953) 589
Medium: methanol, 0.01 M Et4NCl. By potentiometry, K1=5.7.
Also data for acetonitrile, 0.01 M Et4NClO4 and for the pentaethyl ester.
**********
C96H144O24 L CAS 169888-22-6 (7534)
C-Undecylcalix[4]resorcinarene octa-alpha-(methyl ethanoate);
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 25°C 100% U 1995FDa (107969) 590
K=4.10
Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.
K: MA(org)+L(org)=MLA(org) where A=picrate.
**********
C104H160O24 L CAS 175349-60-7 (7494)
C-Heptylcalix[4]resorcinarene octa-alpha-(tert-butyl ethanoate);
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 25°C 100% U 1995FDa (107980) 591
K=4.57
Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.
K: MA(org)+L(org)=MLA(org) where A=picrate.
**********
C104H168N8O16 L CAS 175349-61-8 (7483)
C-Heptylcalix[4]resorcinarene octa-alpha-(N,N-diethyl acetamide);
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
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Rb+ dis non-aq 25°C 100% U 1995FDa (107984) 592
K=5.64
Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.
K: MA(org)+L(org)=MLA(org) where A=picrate.
**********
C120H192O24 L CAS 175349-58-3 (7495)
C-Undecylcalix[4]resorcinarene octa-alpha-(tert-butyl ethanoate);
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 25°C 100% U 1995FDa (108012) 593
K=4.65
Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.
K: MA(org)+L(org)=MLA(org) where A=picrate.
**********
C120H200N8O16 L CAS 169888-21-5 (7490)
C-Undecylcalix[4]resorcinarene octa-alpha-(N,N-diethyl acetamide);
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ dis non-aq 25°C 100% U 1995FDa (108023) 594
K=5.56
Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.
K: MA(org)+L(org)=MLA(org) where A=picrate.
**********
Polymer H2L X-14885A (4547)
Antibiotic X14885A, calcium ionophore
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ gl alc/w 25°C 100% U K1=2.7 1989ABb (108078) 595
Medium: MeOH
**********
Polymer (4204)
Pyruvate kinase;
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp R4N.X 25°C 0.10M U 1966SSc (108410) 596
K'=1.30
Medium: Me4NCl. See reference for definition
**********
Polymer (1966)
poly(Benzo-1,4,7,10,13,16-hexaoxacyclooctadecane)
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Rb+ sp non-aq 25°C 100% U K1=8.03 1979KMb (108427) 597
Medium: CHCl3
**********

Polymer (1965)
poly(Benzo-1,4,7,10,13-pentaoxacyclopentadecane)

| Metal | Mtd | Medium | Temp | Conc | Cal | Flags | Lg K values | Reference | ExptNo |
|---|---|---|---|---|---|---|---|---|---|
| Rb+ | sp | non-aq | 25°C | 100% | U | | K1=9.64 | 1979KMb (108431) | 598 |

Medium: CHCl3

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EXPLANATORY NOTES

DATA Flags are :-

T  Data at other TEMPERATURES
I  Data with various BACKGROUNDS
H  Data for THERMOCHEMICAL quantities
M  Data for TERNARY Complexes

EVALUATION Flags are :-

T or IUP=T signifies EVALUATION RATING = Tentative by IUPAC

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