

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 118 experiments for
(no ligands specified)

Metal : Cm+++

(no references specified)

(no experimental details specified)

e- HL Electron (442)
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	oth	none	25°C	0.0	U				1969NBa (409)	1
K(Cm+e=Cm(II))=-84.5(-5.0V)										

Method:Estimated data

Cm+++	sp	oth/un	25°C	?	U				1965MIb (410)	2
K(Cm++++ + e)=55 (3250 mV)										

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	dis	NaClO4	20°C	3.00M	U			K1=0.39 B2=0.22	1982FKb (1820)	3

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	sp	NaCl	25°C	0.0	C	I		K1=8.1 B2=13.00 B3=15.2 B4=13.0	1999FKa (3167)	4

Method: Laser fluorescence spectroscopy. Media: 0-6 m NaCl.

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

Cm+++	dis	NaClO4	20°C	3.00M	U			K1=0.56 B2=0.20	1982FKb (4609)	5
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Cm+++	dis	NaCl	30°C	1.00M	U			K1=0.21 B2=-0.03	1980KMa (4610)	6
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Cm+++	ix	none	?	0.0	U			K1=1.17	1956WVa (4611)	7
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ClO4- HL Perchlorate CAS 7001-90-3 (287)

Perchlorate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	dis	NaClO4	25°C	2.00M	U	T		B2=0.38	1981LMa (6176)	8

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

Fluoride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	dis	NaClO4	25°C	0.50M	C			K1=3.34 B2= 6.18 B3=9.08	1970ALc (6809)	9
Method: extraction of 244Cm from 0.50 M NaClO4 medium into toluene/ di-(2-ethylhexyl)phosphoric acid. Medium pH 3.6.										

Cm+++	dis	NaClO4	25°C	0.50M	U			K1=3.34 B2=6.18 B3=9.1	1969ALd (6810)	10
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Cm+++	sol	NaClO4	23°C	0.10M	U	TIH		K3=3.90 Ks(CmF3(s)=CmF3)=-4.91	1954FEa (6811)	11
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Medium: HClO4. DH(K3)=17.9kJ mol⁻¹, DS=139 J K⁻¹ mol⁻¹; DH(Ks)=16.7, DS=-38
At 0 C: K3=3.87, Ks=-5.22. At I=0 corr, 47 C K3=4.37, Ks=-4.75

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

Nitrate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	dis	NaCl	30°C	1.00M	U			K1=0.34 B2=0.10	1980KMa (9623)	12
Cm+++	dis	R4N.X	25°C	2.0M	U			K1=-0.12	1973CDd (9624)	13
Medium:NH4SCN										

Cm+++	ix	R4N.X	20°C	1.0M	U			K1=0.57	1960LPb (9625)	14
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Method: cation exchange. Medium: NH4Cl,ClO4

N3-		HL		Azide				CAS 7782-79-8	(441)	

Azide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	sp	none	25°C	0.0	U			K1=0.90 B2=1.38	1983MCb (10182)	15

OH-		HL		Hydroxide				(57)		

Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Cm+++ dis oth/un 30°C 0.01M C 1989MKb (11127) 16
*K1=-3.30

Medium: ClCH2COOH

Cm+++ dis NaClO4 ? 0.10M U 1973HHd (11128) 17
*K1=-5.40

Medium: LiClO4

Cm+++ oth R4N.X 25°C 0.01M U K1=10.6 B2=18.9 1972SSf (11129) 18
Medium:0.005 M NH4ClO4. Method: electrical migration or transference number

Cm+++ dis NaClO4 23°C 0.10M U 1969DHa (11130) 19
*K1=-5.92

Medium: LiClO4

Cm+++ dis NaClO4 23°C 0.10M U 1969GMa (11131) 20
*K1=-6.05

Medium: LiClO4

Cm+++ dis NaClO4 25°C 0.10M U 1969MGf (11132) 21
*K2=-7.85

Medium: LiClO4 + tris-buffer

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

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

Cm+++ ix R4N.X 20°C 1.00M U K1=17.5 B2=34.1 1971M0d (13131) 22
K(Cm+H2L)=1.48
K(Cm+2H2L)=2.08
K(Cm+3H2L)=2.84
K(Cm+4H2L)=3.1

Medium:NH4Cl

Cm+++ oth none ? 0.0 U K1=20.2 B2=36.8 1969M0c (13132) 23
K(Cm+H2L)=2.40
K(Cm+2H2L)=3.60
K(Cm+3H2L)=5.61
K(Cm+4H2L)=6.2

Methods: solubility, ion exchange, distribution, EMF

P309--- H3L CAS 13566-25-1 (235)
Cyclotrimetaphosphate;

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

Cm+++ ix none 25°C 0.0 U K1=6.08 1972EZb (13950) 24

Cm+++ ix R4N.X 25°C 0.20M U I K1=3.64 1967ELa (13951) 25

Medium: NH4ClO4. K1=5.92(I=0 corr)

SCN- HL Thiocyanate CAS 463-56-9 (106)
Thiocyanate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	oth	NaClO4	25°C	1.0M	U	R		K1=0.44	1997BPa (14849)	26
IUPAC evaluation										
Cm+++	dis	oth/un	30°C	1.0M	C T H				1980KMe (14850)	27
In 1.0 M NH4ClO4/NH4SCN. Extraction of 244Cm into hexane/ammonium dinonyl-naphthalene sulfonate. Data for 15-45 C. DH(K1)=-2.8 kJ mol ⁻¹ , DH(K2)=0.08										
Cm+++	dis	NaClO4	25°C	5.0M	U T H T			K1=0.62	1974KCa (14851)	28
K1=0.46(10 C), 0.72(40 C), 0.75(55 C). By calorimetry, DH(K1)=11.7 kJ mol ⁻¹										
Cm+++	dis	R4N.X	30°C	1.00M	U	T		K1=0.18 B2=0.61	1974KMa (14852)	29
Medium: NH4ClO4/NH4SCN, pH 2.8										
Cm+++	dis	R4N.X	25°C	2.0M	U			K1=0.6 B2=0.70 B3=1.15	1973CDd (14853)	30
Cm+++	dis	NaClO4	25°C	1.0M	U	T		K1=0.45 B2=-0.07 B3=-0.08	1972HPb (14854)	31
Cm+++	dis	NaClO4	25°C	1.0M	U	T		K1=0.43 B2=0.85	1965CKb (14855)	32
Cm+++	ix	NaClO4	?	5.0M	U I			K1=0.27 B2=0.00	1962LYb (14856)	33
In 0.5 M NH4ClO4 K1=0.67. In I=0 corr K1=1.62. Method: cation exchange										

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	dis	NaCl	30°C	1.00M	U			K1=1.51 B2=2.38	1980KMa (16063)	34
Cm+++	dis	NaClO4	25°C	1.0M	U I				1978Rba (16064)	35
K(Cm+HL)=0.52 K(Cm+2HL)=0.83										
Cm+++	oth	R4N.X	15°C	0.10M	U T			K1=2.41	1973STe (16065)	36
Method: electrical migration or transference number(electrophoresis) Medium: NH4Cl. K1=2.45(25 C), 2.48(35 C)										
Cm+++	dis	none	25°C	0.0	U			K1=3.88 B2=5.70 B3=5.15	1972Mcc (16066)	37
Cm+++	dis	NaClO4	25°C	0.50M	U			K1=1.85 B2=2.69	1968ALd (16067)	38

By cation exchange: K1=1.86, B2=2.37

Cm+++ dis NaClO4 55°C 2.0M U T H K1=1.61 B2=2.30 1967CCd (16068) 39
K1=1.08(0 C), 1.34(25 C), 1.49(40 C); B2=1.66(0 C), 1.86(25 C), 2.05(40 C)
DH(K1)=17.1 kJ mol⁻¹, DS=83.6 J K⁻¹ mol⁻¹

Cm+++ ix R4N.X 25°C 0.75M U I K1=1.75 B2=1.93 1960LPb (16069) 40
Medium: NH4Cl,ClO4. I=0 corr.: K1=3.66, K2=0.81

CH5O3P H2L CAS 13590-71-1 (1752)
Methylphosphonic acid; CH3.PO3H2

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

Cm+++ ix none 25°C 0.00 U I 1967BEa (18127) 41
K(Cm+HL)=2.82

At I=0.5 M NH4ClO4: K(Cm+HL)=1.86

CH5O4P H2L CAS 2617-47-2 (1977)
Hydroxymethylphosphonic acid; HO.CH2.PO3H2

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

Cm+++ ix R4N.X 25°C 0.20M U 1972EZd (18147) 42
K(Cm+HL)=1.65
K(Cm+2HL)=3.28

Medium: NH4ClO4

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

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

Cm+++ oth oth/un 25°C 0.10M U K1=5.30 B2=8.90 1971STe (18832) 43
Method : electrical migration or transference number

Cm+++ ix NaClO4 25°C 0.50M U K1=4.80 B2=8.61 1968ALd (18833) 44

Cm+++ dis R4N.X 20°C 0.10M U B2=8.8 1966STa (18834) 45
B3=12.1

Medium : NH4Cl

Cm+++ ix oth/un 23°C 0.20M U K1=5.96 B2=10.15 1960LPa (18835) 46

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

Cm+++ cal NaCl 25°C 2.0M U H K1=1.92 1985CLb (19922) 47

DH(K1)=6.0 kJ mol⁻¹

Cm+++ dis NaClO4 25°C 2.00M U T K1=2.03 1969M0c (19923) 48
0-55 C. 0 C: K1=1.73, 40 C: K1=2.11, 55 C: K1=2.27
From literature, I=0: K1=3.31, B2=4.72, B3=6.30, B4=6.56

Cm+++ dis NaClO4 20°C 0.50M U K1=2.06 B2=3.09 1963GRa (19924) 49

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

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

Cm+++ dis NaClO4 25°C 2.00M U T T K1=2.59 B2=4.56 1972CDb (20515) 50
0.5 C: K1=2.63, K2=1.83; 52 C: K1=2.52, K2=1.82

Cm+++ dis NaClO4 20°C 0.50M U K1=2.85 B2=4.75 1963GRa (20516) 51

C2H5NO2 HL Glycine CAS 56-40-6 (85)
2-Aminoethanoic acid; H2N.CH2.COOH

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

Cm+++ dis NaClO4 25°C 2.0M U T H T 1968TCa (21515) 52
K(Cm+HL)=0.80
K=0.62(0 C), 0.66(11 C), 0.95(40 C). DH=13.8 kJ mol⁻¹, DS=62.7 J K⁻¹ mol⁻¹

C2H5O5P H3L CAS 4408-78-0 (4225)
Phosphonoethanoic acid; HOOC.CH2.PO3H2

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

Cm+++ ix none 25°C 0.00 U 1972EZc (21891) 53
K(Cm+HL)=5.17
B(Cm+2HL)=8.5
K(Cm+H2L)=2.72

C3H6O3 HL L-Lactic acid CAS 79-33-4 (82)
L-2-Hydroxypropanoic acid; CH3.CH(OH).COOH

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

Cm+++ oth KCl 10°C 1.50M U K1=2.59 B2=4.29 1972SNa (25424) 54
Method: (gelatinized cellulose acetate), electrophoresis

Cm+++ dis R4N.X 20°C 0.50M U 1967ESa (25425) 55
B3=6.46
Medium: NH4ClO4. By ix B3=5.78

C3H9O3P HL CAS 38585-11-9 (4238)

Ethyl(hydroxymethyl)phosphinic acid; C2H5(HO.CH2).PO2H

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

Cm+++ ix R4N.X 25°C 0.20M U K1=1.78 1972EZd (27998) 56
Medium: NH4ClO4

C4H2O4 H2L Squaric acid CAS 2892-51-5 (439)
3,4-Dihydroxy-3-cyclobutene-1,2-dione;

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

Cm+++ ix R4N.X 25°C 1.00M U K1=2.34 B2=3.46 1972CSb (28641) 57
Medium: NH4ClO4

C4H6O6 H2L L-Tartaric acid CAS 87-69-4 (92)
L-Tartaric acid, L-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

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

Cm+++ dis oth/un 20°C 0.10M U K1=6.84 1966STa (31219) 58
Medium: NH4Cl

Cm+++ dis NaCl ? 0.10M U B2=7.40 1965MSd (31220) 59
Method: paper electrophoresis

C4H8N2O4 H2L CAS 39156-77-9 (3008)
Hydrazine-N,N-diethanoic acid; H2N.N(CH2.COOH)2

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

Cm+++ oth KNO3 25°C 0.10M U K1=10.98 B2=19.97 1971LSc (33102) 60
K(Cm+HL)=4.13

Method: electrical migration or transference number

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

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

Cm+++ oth oth/un 25°C 0.10M U K1=2.96 B2=5.15 1971SHb (33457) 61
B3=6.36

Method: electrical migration or transference number

Cm+++ ix R4N.X 25°C 0.50M U K1=2.46 B2=4.48 19560Ca (33458) 62
K3=1.04
Medium: NH4ClO4

C4H14N2O4P2 H2L CAS 37107-07-6 (4287)
Ethylenebis(iminomethylenephosphonous acid)

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Cm+++     ix  oth/un 25°C 0.50M U                                1971EZd (35829) 63
                                                K(Cm+H2L)=6.40

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C4H14N2O6P2      H2L      EDDPO      CAS 1733-49-9 (2435)
1,2-Diaminoethane-N,N'-bis(methylenephosphonic) acid; (H2O3P.CH2.NH.CH2)2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Cm+++     ix  R4N.X 25°C 0.50M U                                1973EZa (35873) 64
                                                K(Cm+H2L)=6.40
Medium: NH4ClO4
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Cm+++     oth oth/un 25°C 0.10M U      K1=16.57      1971SHb (35874) 65
                                                K(Cm+HL)=12.24
                                                K(Cm+H2L)=7.80
                                                K(Cm+H3L)=6.13

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Method: electrical migration or transference number
*****
C6H8O7          H3L      Citric acid      CAS 77-92-9 (95)
2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCCH2.CH(OH)(COOH).CH2COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Cm+++     dis NaClO4 25°C 0.10M U                                1974HHa (46062) 66
                                                K(CmL2+6H)=14.23
                                                K(Cm(HL)+5H)=9.63
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Cm+++     dis oth/un 25°C 0.10M U      K1=7.68      1971GBa (46063) 67
                                                K(Cm+2H3L=CmHL2+5H)=-9.7
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Cm+++     oth oth/un 25°C 0.10M U      K1=7.93      B2=11.23     1971STe (46064) 68
                                                K(CmL+HL)=2.50

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Constants obtained by survey of literature data

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Cm+++     oth oth/un  ?      ?      U                                1969MGf (46065) 69
                                                K(CmOH+L)=5.3
                                                K(CmOH+2L)=9.32
                                                K(Cm(OH)2+L)=5.38

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C6H9NO6          H3L      NTA      CAS 139-13-9 (191)
Nitrilotriethanoic acid; N(CH2.COOH)3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Cm+++     cal NaClO4 25°C 0.50M C  H      K1=11.30     1987CRa (46744) 70
DH(K1)=-11.5 kJ mol-1; DS(K1)=178 J K-1 mol-1
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Cm+++ dis oth/un rt 6.00M U K1=11.18 B2=20.61 1975KPb (46745) 71
Method: distribution of Am betw. 1M trioctylamine in Toluole/EDTA in 6M
LiNO3 aq.; pH=3-4

Cm+++ ix R4N.X 20°C 1.00M U K1=10.93 1971M0c (46746) 72
K(Cm+L+HL)=13.70

Medium: NH4Cl

Cm+++ oth oth/un 20°C 0.10M U K1=11.52 B2=19.57 1971SHb (46747) 73
K(Cm+L+HL)=13.72

Method: electrical migration or transference number

Cm+++ oth none 25°C 0.00 M K1=13.53 1969M0c (46748) 74
Constants from survey of literature data

Cm+++ ix R4N.X 25°C 0.10M U T K1=11.80 B2=20.58 1968EAa (46749) 75
Medium: NH4ClO4

Cm+++ dis R4N.X 20°C 0.10M U B2=20.13 1966STa (46750) 76
Medium: NH4Cl

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

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

Cm+++ oth KNO3 25°C 0.10M U 1972SHb (48704) 77
K(Cm+HL)=9.20
K(Cm+2HL)=17.60

Method: electrical migration or transference number

Cm+++ dis oth/un 25°C 0.10M U K1=9.27 1971EVb (48705) 78

Cm+++ oth oth/un 25°C 0.10M U K1=9.2 B2=16.7 1971SHb (48706) 79
Method: electrical migration or transference number

Cm+++ ix R4N.X 25°C 0.10M U K1=9.21 B2=17.13 1969EBa (48707) 80
Medium: NH4ClO4

C6H20N2O12P4 H8L EDTPA CAS 1429-50-1 (434)
Ethane-1,2-bis(iminobis(methylenephosphonic acid)); ((H2O3PCH2)2NCH2.)2

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

Cm+++ oth KNO3 25°C 0.10M U K1=21.89 1971SHb (52326) 81
K(Cm+HL)=17.74
K(Cm+H2L)=14.47
K(Cm+H3L)=10.83
K(Cm+H4L)=6.43

K(Cm+H5L)=4.73. Method: electrical migration or transference number

C7H11N06 H3L CAS 40199-58-4 (3165)
N-(2'-Carboxyethyl)iminodiethanoic acid; HOOC.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	ix	R4N.X	25°C	0.10M	U			K1=10.65 B2=17.95 K(Cm+HL)=4.12	1968EAa (56881)	82

Medium: NH4ClO4

C7H15O3P HL CAS 9095-99-6 (4458)
Diethylphosphinylpropanoic acid; (CH3.CH2)2.PO.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	ix	R4N.X	25°C	0.50M	U			K1=1.83	1972Eza (58025)	83

Medium: NH4ClO4

C8H5O2F3S HL TTA CAS 326-91-0 (165)
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	dis	oth/un	25°C	0.10M	U			B3=13.40	1969KSa (58609)	84

C8H22N2O6P2 H4L EDDIPH CAS 13516-59-1 (1355)
Diaminoethane-N,N'-di(isopropylphosphonic)acid; (CH2.NH.C(CH3)2.PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	oth	oth/un	25°C	0.10M	U			K1=17.70 K(Cm+HL)=13.85 K(Cm+H2L)=9.04 K(Cm+H3L)=6.26	1971SHb (63352)	85

Method : electrical migration or transference number

C10H7O2F3 HL CAS 326-06-7 (196)
3-Benzoyl-1,1,1-trifluoroacetone; CF3.CO.CH2.CO.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cm+++	dis	oth/un	25°C	0.10M	U			B3=15.15	1969KSa (69139)	86

C10H11N05 H3L CAS 100844-86-8 (2108)
N-(2-Hydroxyphenyl)iminodiethanoic acid; HO.C6H4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Cm+++ dis R4N.X 25°C 0.10M U 1971EVa (71040) 87

K(Cm+HL)=6.80
K(Cm+2HL)=11.94

Medium: 0.1 M NH4ClO4

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

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

Cm+++ ix R4N.X 25°C 0.10M U K1=9.21 B2=17.69 1969EBa (71254) 88

Medium: 0.1 M NH4ClO4

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

Cm+++ cal NaCl 25°C 2.0M U H K1=16.86 1985CLb (73662) 89
DH(K1)=-29.3 kJ mol⁻¹

Cm+++ dis oth/un rt 6.00M U K1=17.33 1975KPb (73663) 90
Method: distribution of Am betw. 1M Trioctylamine in Toluol/EDTA in 6M
LiNO3 aq.; pH=3-4

Cm+++ oth KNO3 25°C 0.10M U T K1=17.10 1972SHc (73664) 91
K(Cm+HL)=9.32

Method: electrical migration or transference number

Cm+++ ix R4N.X ? 0.10M U I K1=17.29 1971EZb (73665) 92
Medium: (NH4ClO4), I= near zero, K1=19.95

Cm+++ oth oth/un 20°C 0.10M U K1=17.10 1971SHb (73666) 93
K(Cm+HL)=9.32

Method: electrical migration or transference number

Cm+++ ix R4N.X 25°C 0.10M U K1=18.45 1957FSa (73667) 94
Medium: 0.1 M NH4ClO4

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

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

Cm+++ dis KCl 25°C 0.10M U B2=4.1 1971ZMa (75347) 95
K(Cm+L+HL)=2.82
K(Cm+2HL)=1.0

C11H11NO6 H3L CAS 1147-65-5 (425)
N-(2'-Carboxyphenyl)iminodiethanoic acid; HOOC.C6H4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cm+++	ix	R4N.X	25°C	0.10M	U		K1=9.27	1969EBa (77825)	96
Medium: NH4ClO4									

C11H18N2O8		H4L					CAS 4408-81-5 (923)		
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.)2.CH2									
Cm+++	cal	NaClO4	25°C	0.50M	C	H	K1=13.05	1987CRa (79430)	97
DH(K1)=12.6 kJ mol ⁻¹ ; DS(K1)=292 J K ⁻¹ mol ⁻¹									
Cm+++	dis	NaCl	25°C	0.10M	C		K1=13.79	1985CMc (79431)	98
Method: extraction of 244Cm from 0.1 M NaCl (pH 5.5) into toluene/HDEHP.									

C12H12N2O2		HL					CAS 4173-74-4 (4915)		
1-Phenyl-3-methyl-4-acetylpyrazol-5-one;									
Cm+++	dis	oth/un	25°C	0.10M	U		B3=12.82	1973BKc (81042)	99

C14H9O2F3		HL					(3429)		
1,1,1-Trifluoro-1'-naphthoylacetone;									
Cm+++	dis	oth/un	25°C	0.10M	U		B3=18.17	1969KSa (86872)	100

C14H16O3P2		HL					CAS 1638-77-3 (5072)		
(Methylenephosphinylmethyl)phenylphosphinic acid;									
Cm+++	ix	R4N.X	25°C	0.20M	U	I	K1=3.35	1972EZb (88026)	101
Medium: NH4ClO4. I=0: K1=4.18									

C14H22N2O8		H4L			CDTA		CAS 482-54-2 (200)		
trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;									
Cm+++	dis	R4N.X	20°C	0.10M	U		K1=18.79	1990GBc (88611)	102
Medium: NH4ClO4									
Cm+++	cal	NaClO4	25°C	0.50M	C	H	K1=18.10	1987CRa (88612)	103

DH(K1)=-9.7 kJ mol⁻¹; DS(K1)=314 J K⁻¹ mol⁻¹

Cm+++ ix oth/un 25°C 0.10M U I K1=18.96 1971EZc (88613) 104
In I=0, K1=21.62

At 80 C: K1(I=0.05)=19.46, K1(0.06)=19.49, K1(0.07)=19.35, K1(0.17)=18.35

Cm+++ oth oth/un 25°C 0.10M U K1=18.34 1971SHb (88614) 105
K(Cm+HL)=9.30

Method: electrical migration or transference number.

Cm+++ oth oth/un ? 0.0 U K1=21.6 1969M0c (88615) 106
From survey of literature data

Cm+++ oth KCl 20°C 0.10M U K1=18.7 1967SMa (88616) 107
Method: ionic migration

Cm+++ ix R4N.X 25°C 0.10M U K1=18.81 1966BAc (88617) 108
Medium: NH4ClO4

Cm+++ dis R4N.X 20°C 0.10M U K1=18.40 1966STa (88618) 109
Medium: NH4Cl

C14H23N3O10 H5L DTPA CAS 67-43-6 (238)
Diethylenetriamine-pentaethanoic acid; HOOC.CH2.N(CH2.CH2.N(CH2.COOH)2)2

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

Cm+++ sp oth/un 20°C 0.50M U K1=22.85 1972PRc (89189) 110

Cm+++ ix R4N.X 25°C 0.10M U K1=23.81 1971BRa (89190) 111
K(Cm+HL)=15.48

Medium: NH4ClO4

Cm+++ ix R4N.X 20°C 1.0M U K1=21.1 1971M0c (89191) 112
Medium: NH4Cl

Cm+++ oth oth/un 25°C 0.10M U K1=22.83 1971SHb (89192) 113
K(Cm+HL)=14.40

Method: electrical migration or transference number.

Cm+++ oth oth/un ? 0.0 U K1=25.7 1969M0c (89193) 114
From survey of literature data

Cm+++ oth KNO3 25°C 0.10M U K1=22.83 1968LFb (89194) 115
Method: electromigration

Cm+++ oth oth/un 0.10M U K1=23.3 1966STb (89195) 116
Literature data from ORNL-3651

Cm+++ ix R4N.X 25°C 0.10M U K1=22.99 1965BAc (89196) 117

Medium: NH4ClO4

C17H14N2O2 L CAS 4551-69-3 (698)

4-Benzoyl-3-methyl-1-phenyl-2-pyrazolin-5-one;

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

Cm+++ dis oth/un 25°C 0.10M U 1973BKc (95876) 118
B3=16.81

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EXPLANATORY NOTES

DATA Flags are :-

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

EVALUATION Flags are :-

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

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