

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 695 experiments for
(no ligands specified)

Metal : Ho+++

(no references specified)

(no experimental details specified)

e- HL Electron (442)
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	oth	none	25°C	0.0	U			1974JOb (572)	1	
K(Ho+3e=Ho(s))=-119.2(-2.35V)										
K(Ho+e=Ho(II))=-49(-2.9V)										

Method: literature evaluated data

Ho+++	oth	none	25°C	0.0	U			1952LAb (573)	2
K(Ho+3e)=-117.6(-2320 mV)									

AsO4--- H3L Arsenate CAS 7778-39-4 (1557)
Arsenate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	sol	none	25°C	0.0	C			1992FIa (1148)	3	
Kso(HoAsO4)=-22.87										

Equilibrium monitored by EDTA and iodine titrations.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	sp	alc/w	25°C	50%	U I			1973KPe (2028)	4	
Medium: 50% w/w MeOH/H2O, 3 M LiClO4. K1=-0.62(0%); K1in=-0.8(90%)										

Ho+++	sp	oth/un	22°C	0.0	U			1966MSf (2029)	5
K1=-0.67 B2=-3.10									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.70M	C			2004LBb (3244)	6	
K1=5.84 K(Ho+HCO3=HoHCO3)=1.41										

Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.55, B2=13.00,
K(Ho+HCO3=HoHCO3)=2.46, K(Ho+HL=HoL+H)=-2.78, K(Ho+2HL=HoL2+2H)=-7.66

 Ho+++ dis NaClO4 25°C 0.70M C I K1=5.82 B2=10.48 1998LBb (3245) 7
 Method: H2O/tributylphosphate distribution and ICP-mass spectrometry.
 Values calculated for I=0.0 M, K1=7.80, B2=13.56

Ho+++ sol none 25°C 0.0 C 1986FMa (3246) 8
 Kso(Ho2(CO3)3)=-32.8

Ho+++ sol none 25°C 0.0 C 1986HMa (3247) 9
 Kso(Ho2(CO3)3)=-32.8
 Method: spectrophotometry.

Ho+++ sp NaNO3 25°C 2.5M C 1979DBa (3248) 10
 B(Ho(CO3)4)=16.87
 B(Ho(edta)CO3)=19.24
 Method: by competition with edta

Ho+++ dis oth/un 20°C 2.5M C 1979DBb (3249) 11
 B4=15.55
 Media: 2.5 M (NH4)2NO3/hexane. Analysis by NAA. By competition with edta;
 K1(Ho(edta))=18.57 recalculated for I=2.5 from J.Am.Chem.Soc.,75 1953,4196

C6N6Fe--- H3L Ferricyanide (2491)
 Hexacyanoferrate (III); Fe(III)(CN)6---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++	cal	none	25°C	0.00 M	H			K1=3.66	1972SCd (3653)	12
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DH(K1)=4.4 kJ mol⁻¹, DS=84.9 J K⁻¹ mol⁻¹

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++	dis	NaCl	25°C	1.0M C				K1=-0.15	1997HTb (5045)	13
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Method: by solvent extraction from 1.0 M NaCl into CHCl3, 0.1 M
 1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.

Ho+++	cal	non-aq	25°C	100%	U	H		K1=2.61 K3=1.63 K4=1.46	1991ITa (5046)	14
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Medium: DMF, 0.2 M Et4NClO4. DH(K1)=18.0 kJ mol⁻¹, DH(K2)=24.6, DH(K3)=20
 DH(K4)=32. DS(K1)=110, DS(K2)=128, DS(K3)=98 J K⁻¹ mol⁻¹

Ho+++	sol	NaClO4	25°C	?	U			K1=0.30	1982MAa (5047)	15
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Ho+++	cal	non-aq	25°C	100%	U			K1=2.28 B2=4.50	1980VCa (5048)	16
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Medium: diemthylacetamide

Ho+++ sp non-aq 25°C 100% U K1=0.0 1974KBb (5049) 17
Medium: propanol, 1 M LiClO4

Ho+++ sp alc/w 25°C 50% U I K1=0.39 1971KBf (5050) 18
K1in=-0.96
Medium: 50% w/w MeOH/H2O, 3 M LiClO4. K1=-0.08(0%); K1=0.82, K1in=-0.30(100%)

Ho+++ sp alc/w 25°C 50% U I K1=0.45 1971KBg (5051) 19
K1in=-0.82
Medium: 50% v/v EtOH/H2O. K1=0.17(25%); K1=0.70, K1in=-0.51(75%); K1=0.85,
K1in=-0.12(90%); K1=0.94, K1in=-0.06(100%)

Ho+++ sp oth/un 22°C 0.0 U K1=-2.03 1966MSf (5052) 20

Ho+++ sol none 25°C 0.0 U 1961AEa (5053) 21
Kso(Ho(OH)2.5Cl0.5)=-22.2

I=0 corr. Unstable

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

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

Ho+++ ix oth/un 25°C 0.02M C T H K1=3.78 B2= 5.98 2004LMa (6953) 22
Medium: 0.025 M HNO3. Applying Pitzer parameters: at I=0, K1=9.86.
Data for 5 to 45 C. DH(K1)=10.0 kJ mol-1, DH(B2)=21.1.

Ho+++ ISE NaClO4 25°C 0.0 C I K1=4.28 2000LBa (6954) 23
Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaClO4.
At I=0.70 M, K1=3.349.

Ho+++ ix KNO3 25°C 0.02M C K1=3.74 B2= 6.28 1999SBc (6955) 24
Medium: 0.025 M HNO3. Additional method: ICP-MS.
Assumed K1(HF) = 3.03, derived from literature values.

Ho+++ ISE none 25°C 0.0 C H K1=3.31 B2=6.81 1989MJa (6956) 25
Kso=-14.1
Also by conductivity and radiometry. DH(Kso)=36.4 kJ mol-1; DS=-140.1

Ho+++ ISE R4N.X 25°C 0.50M C K1=3.31 B2=6.81 1989MJb (6957) 26

Ho+++ cal NaClO4 25°C 1.00M C H 1988GBa (6958) 27
DH(K1)=10.0 kJ mol-1; DS(K1)= 101 J mol-1 K-1

Ho+++ ISE NaCl 25°C 1.00M C K1=3.243 1985BBb (6959) 28

Ho+++ gl KCl 25°C 1.00M U M 1981KTb (6960) 29
K(HoEDTA+F)=1.83
K(Ho(EDTA)F+F)=0.48

Ho+++ EMF NaClO4 25°C 1.0M U H K1=3.52 1967WCa (6961) 30
By calorimetry: DH(K1)=30.3 kJ mol⁻¹, DS=168.9 J K⁻¹ mol⁻¹

I03- HL Iodate CAS 7782-68-5 (1257)
Iodate;

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

Ho+++ sol oth/un 25°C 0.0 U 1966FPb (8520) 31
Kso=-10.70

I04- HL Periodate CAS 13444-71-8 (6063)
Periodate;

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

Ho+++ sol oth/un 25°C dil U 1974L0a (8605) 32
Kso(Ho(H2IO6)(H2O)3)=-9.70

Mo04-- H2L Molybdate (443)
Molybdate;

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

Ho+++ con oth/un 25°C .001M U K1=4.32 1968DKc (8736) 33

Mo12042U----- H8L (2922)
Uranium-12-molybdate;

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

Ho+++ gl oth/un 20°C 0.10M U 1989SBb (8775) 34
B(HoHL)=7.93
B(HoH2L)=8.69

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

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

Ho+++ cal NaClO4 25°C 2.0M C IH K1=-0.85 1998BMb (9710) 35
DH(K1)=9.6 kJ mol⁻¹. From Pitzer extrapolation to I=0.0, K1=-0.08,
DH(K1)=8.5 kJ mol⁻¹

Ho+++ sp non-aq 25°C 100% U K1=0.4 1974KBb (9711) 36
Medium: PrOH, 1 M LiClO4

Ho+++ sp KNO3 ? var U 1970KSf (9712) 37

K(Ho+3L+HL)=-0.74
K(HoL3HL+2HL)=-1.12

Ho+++ dis NaClO4 25°C 1.0M U K1=-0.22 1965UKa (9713) 38

OH- HL Hydroxide (57)
Hydroxide;

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

Ho+++ gl NaClO4 25°C 0.0 C IH 2000KBa (11616) 39
*K1=-7.56
In 0.7 M NaClO4, *K1=-7.87. DH(*K1)=49 kJ mol⁻¹.

Ho+++ gl NaCl 25°C 0.10M U I 1999FBa (11617) 40
*B(1,3)=-21.46
In 0.1 M Me4NCl, *B(1,3)=-22.08.

Ho+++ EMF alc/w 20°C 25% U 1973SPe (11618) 41
*K1(HoA+H2O=HoAOH+H)=-7.30
Medium: ca.25 to 35% w/w MeOH or EtOH/H2O. H3A=NTA

Ho+++ dis NaClO4 ? 0.10M U 1971GDb (11619) 42
*K1=-5.7
Medium: LiClO4

Ho+++ gl NaClO4 25°C 0.30M U 1966FKa (11620) 43
*K1=-8.04

Ho+++ sol none 25°C 0.0 U 1961AEa (11621) 44
Kso=-25.7(50 days)
Kso=-26.6(150 days)

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

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

Ho+++ sol none 25°C 0.0 M 1997LBd (13219) 45
Kso(HoP04)=-25.07
Calculated from data for 0.10 M HClO4 solution.

Ho+++ sol oth/un 25°C 0.0 C I 1993FKb (13220) 46
Kso(HoP04)=-26.31
In synthetic seawater, Ks(HoP04)=-23.89.

Ho+++ sol none 25°C 0.0 C 1991FBa (13221) 47
Kso(HoP04)=-25.57

P207---- H4L Pyrophosphate CAS 2466-09-3 (198)
Diphosphate; from (HO)2PO.O.PO(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	kin	none	25°C	0.0	U		B2=20.88	1967SSo (13599)	48

P3010-----		H5L					CAS 10380-08-2	(1001)	
Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	KNO3	25°C	0.10M	U T H		B2=9.2 K(Ho+2HL)=7.1	1974KRa (13866)	49
K(Ho+2HL)=7.3 and B2=9.6 (35 C), K(Ho+2HL)=6.8 and B2=9.1 (45 C) DH(Ho+2HL)=-28 kJ mol ⁻¹ ; DH(B2)=-28									

ReO4-		HL					Perrhenate (2581)		
Rhenate(VII), Perrhenate;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	sp	oth/un	rt	1.00M	U		K1=-0.76	1970POa (14100)	50
Medium: HReO4									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	dis	oth/un	25°C	1.0M	C		K1=0.45	1997HTb (15082)	51
Method: by solvent extraction from 1.0 M NaSCN into CHCl3, 0.1 M 1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.									

Ho+++	cal	non-aq	25°C	100%	U H		K1=1.7 K3 = 0.5	B2=3.0 1992TIIa (15083)	52
Medium: DMF, 0.2 M R4NX. DH(K1)=8 kJ mol ⁻¹ , DH(B2)=5, DH(B3)=25									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	sp	NaClO4	?	3.0M	U		K1=-0.1 to 0.4	1974NBd (15084)	53
Medium:LiClO4									

S04--		H2L					Sulfate CAS 7664-93-9	(15)	
Sulfate;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	sol	oth/un	25°C	0.66M	C		K1=1.87	2004SBb (16248)	54
Method: solubility of BaSO4 in 0.117 m HoCl3 solution. Calculated for I=0, K1=3.54.									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	cal	none	25°C	0.0	U H			1974POa (16249)	55
DH(K1)=20.4 kJ mol ⁻¹									

Ho+++ oth none 25°C 0.0 U K1=3.59 1973FPb (16250) 56
K1in=0.61

Method: ultrasonic absorption. By conductivity K1=3.60

Ho+++ cal oth/un 25°C 0.0 U H 1969FPa (16251) 57
DH(K1)=14.8 kJ mol⁻¹

Ho+++ cal oth/un 25°C 0.0 U H K1=3.38 B2=4.98 1969IEa (16252) 58
DH(K1)=15.3 kJ mol⁻¹, DH(K2)=6.7; DS(K1)=116.2 J K⁻¹ mol⁻¹, DS(K2)=53.1

Ho+++ ISE NaClO4 25°C 2.0M U H K1=1.24 B2=1.76 1967CCd (16253) 59
By calorimetry: DH(K1)=17.6 kJ mol⁻¹, DS=82.8 J K⁻¹ m⁻¹; DH(K2)=7.1, DS=33.9

Ho+++ con oth/un 25°C 0.0 U K1=3.59 1954SJa (16254) 60

CHO3F3S HL CAS 1493-13-6 (6755)
Trifluoromethanesulfonic acid; CF3SO3H

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

Ho+++ sp non-aq 25°C 100% U 1993BCc (17464) 61
K3=2.53

Medium: MeCN

C2H2O3 HL Glyoxylic acid CAS 298-12-4 (1142)
Glyoxylic acid; OHC.COOH

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

Ho+++ gl NaClO4 20°C 0.10M U K1=2.58 B2=4.48 1964PSd (18423) 62
K3=1.7

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

Ho+++ ix R4N.X 25°C 0.05M C K1=5.85 B2=10.23 2001SBf (18924) 63
K(Ho+HL)=2.17

Medium: 0.05 M NH4NO3. At I=0, K1=6.77, B2=11.41.

Ho+++ gl KCl 25°C 1.0M U M 1988KTa (18925) 64
K(Ho(edta)+L)=2.80

Ho+++ sp NaNO3 20°C 2.50M U M 1981DFa (18926) 65
K(Er(CO3)₄+L)=1.345

C2H3N3S2 HL CAS 2349-67-9 (6245)
2-Amino-5-mercapto-1,3,4-thiadiazole;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  NaClO4 25°C 0.10M U T H      K1=6.43   B2=11.71  1983SSb (19255) 66
                                           K3=4.06

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*****
C2H4O2          HL      Acetic acid      CAS 64-19-7 (36)
Ethanoic acid; CH3.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     sp  NaClO4 21°C 2.0M U              K1=1.75   B2=2.94   1984BMa (20001) 67
                                           B3=3.65
                                           B4=3.99

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-----
Ho+++     sp  NaClO4 21°C 2.00M U             K1=1.72   B2=2.90   1981BMc (20002) 68
                                           B3=3.68
                                           B4=3.93

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-----
Ho+++     cal NaClO4 25°C 2.0M C H              1964GRa (20003) 69
DH(K1)=13.25 kJ mol-1, DS(K1)=76.6 J K-1 mol-1; DH(B2)=20.96, DS(B2)=126;
DH(B3)=18.97, DS(B3)=136.
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-----
Ho+++     gl  NaClO4 20°C 0.10M U              K1=2.01   B2=3.60   1962KPa (20004) 70

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-----
Ho+++     EMF NaClO4 20°C 2.0M U             K1=1.63   B2=2.86   1958S0a (20005) 71
                                           B3=3.75
                                           B4=3.6

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Method: quinhydrone electrode

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*****
C2H4O2S          H2L      Thioglycolic      CAS 68-11-1 (596)
Mercaptoethanoic acid; HS.CH2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  NaClO4 20°C 0.10M U              K(Ho+HL)=1.92
                                           K(HoHL+HL)=1.32

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Ho+++     gl  NaClO4 25°C 2.0M U              K(Ho+HL)=1.32
                                           K(HoHL+HL)=0.8

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*****
C2H4O3          HL      Glycolic acid      CAS 79-14-1 (33)
2-Hydroxyethanoic acid; HO.CH2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     sp  NaClO4 21°C 2.00M U              K1=2.50   B2=4.60   1981BMc (20557) 74
                                           B3=5.81

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B4=6.62

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-----
Ho+++      gl  KNO3   32°C 0.10M U                1980PPf (20558) 75
K(Ho+HL=HoL+H)=-0.67
*K(HoL)=-5.76
K(Ho+2HL=HoL2+2H)=-2.10
*K(HoL2)=-5.70

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Ho+++      gl  NaClO4 20°C 0.10M U          K1=2.991 B2=5.04 1964PKb (20559) 76
B3=6.57

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-----
Ho+++      gl  NaClO4 25°C 2.0M U           K1=2.46 B2=4.41 1962BCa (20560) 77
K3=1.25

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-----
Ho+++      gl  NaClO4 25°C 2.0M U           K1=2.49 B2=4.53 1961CCa (20561) 78
K3=1.38

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-----
Ho+++      EMF NaClO4 20°C 2.0M U          K1=2.54 B2=4.48 1959S0b (20562) 79
B3=5.9
B4=6.4
B5=6.5

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Method: quinhydrone electrode

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

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

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Ho+++      gl  KNO3   25°C 0.0 M T H          K1=5.97          2003MBa (21586) 80
K(Ho+HL=HoL+H)=-3.67

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Extrapolated from data for I=0.07-0.32 M KNO3. DH(K1)=-15.6 kJ mol⁻¹, DS(K1)=61.9 J K⁻¹ mol⁻¹; DH(Ho+HL)=16.5, DS(Ho+HL)=-14.9.

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Ho+++      cal oth/un 25°C 0.03M U   H          K1=4.44          1981PBa (21587) 81

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-----
Ho+++      EMF KCl   25°C 1.0M U   M          1977GMa (21588) 82
K(HoA+L)=4.24
K(HoA+HL)=2.98
K(HoA+H2L)=3.04

```

Method: Pt/H₂ electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.

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

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

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-----
Ho+++      sp  non-aq 25°C 100% U                1992MBb (22101) 83
K8=0.9
K9=0.4

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Medium: MeCN. Method: FT-IR and Raman spectroscopy

C2H6O2 L Ethyleneglycol CAS 107-21-1 (924)
1,2-Dihydroxyethane (Ethane-1,2-diol); HO.CH2.CH2.OH

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

Ho+++ gl NaClO4 22°C 0.10M U 1972MCd (22148) 84
K(HoH-1L+H)=7.05

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

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

Ho+++ ISE non-aq 25°C 100% C H K1=2.36 B2=4.38 1992CBa (23182) 85
B3=5.68

Medium: DMSO, 0.10 M Et4NClO4. By calorimetry, DH(K1)=-19.7, DH(B2)=-40.2,
DH(B3)=-85.7 kJ mol⁻¹.

C3H4O2 HL Acrylic acid CAS 79-10-7 (2044)
Propenoic acid; CH2:CH.COOH

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

Ho+++ gl oth/un 25°C ? U M K1=1.98 1998PAa (23989) 86
K(HoL+acac)=5.92
K(Ho(acac)L+acac)=4.48

Additional method: nmr. Medium not stated.

C3H4O3 HL Pyruvic acid CAS 127-17-3 (1152)
2-Oxopropanoic acid; CH3.CO.COOH

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

Ho+++ nmr NaClO4 25°C 2.00M U H K1=1.34 1980CCa (24056) 87
DH=-4.22 kJ mol⁻¹. Alternative method: Calorimetry.

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

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

Ho+++ gl NaClO4 25°C 1.00M U K1=3.83 B2=6.37 1971DGa (24467) 88
B3=7.67
B(HoHL)=6.31
B(HoHL2)=9.95

Ho+++ gl KNO3 25°C 0.10M U K1=4.39 B2=6.97 1968PFa (24468) 89

C3H4O6 H2L CAS 560-27-0 (4233)
Dihydroxypropanedioic acid; HOOC.C(OH)2.COOH

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

Ho+++ gl KCl 25°C 0.20M U K1=3.71 1973LPb (24627) 90

C3H5NO2 HL (4234)
Isonitrosoacetone; CH3.CO.CH:N.OH, anti-Pyruvic aldehyde oxime

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

Ho+++ gl diox/w 20°C 50% U K1=5.95 1971MAf (24644) 91
Medium: 50% dioxan, 0.1 M NaClO4

C3H6N2O2 L Methylglyoxime CAS 2140-03-6 (2981)
Methylglyoxime; CH3.C(:N.OH).CH:N.OH

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

Ho+++ gl diox/w 20°C 50% U K1=7.07 B2=13.19 1971MAf (24806) 92
Medium: 50% dioxan, 0.1 M NaClO4

C3H6O2 HL Propionic acid CAS 79-09-4 (35)
Propanoic acid; CH3.CH2.COOH

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

Ho+++ sp NaClO4 21°C 2.00M U K1=1.77 B2=2.99 1981BMc (25011) 93
B3=3.71
B4=4.04

Ho+++ gl NaClO4 25°C 2.0M U K1=1.62 B2=2.85 1965CGa (25012) 94

Ho+++ gl NaClO4 20°C 0.10M U K1=1.96 B2=3.46 1964PKa (25013) 95

C3H6O2S H2L Thiolactic acid CAS 79-42-5 (366)
2-Mercaptopropanoic acid; CH3.CH(SH).COOH

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

Ho+++ gl NaClO4 25°C 2.00M U K(Ho+HL)=1.53 1968CMa (25149) 96

Ho+++ gl NaClO4 31°C 2.0M U K(Ho+HL)=1.45 1963BCb (25150) 97
K(HoHL+HL)=1.0

C3H6O2S H2L CAS 107-96-0 (437)
3-Mercaptopropanoic acid; HS.CH2.CH2.COOH

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

Ho+++ gl NaClO4 25°C 2.00M U 1968CMA (25210) 98
K(Ho+HL)=1.46

Ho+++ gl NaClO4 31°C 2.0M U 1963BCb (25211) 99
K(Ho+HL)=1.68
K(HoHL+HL)=1.3

C3H6O3 HL CAS 81598-26-7 (2521)
3-Hydroxypropanoic acid; HO.CH2.CH2.COOH

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

Ho+++ gl NaClO4 25°C 2.00M U K1=1.48 1969JCc (25266) 100

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

Ho+++ gl KNO3 30°C 0.10M U 1983MPc (25460) 101
K(Ho+HL=HoL+H)=0.38
*K(HoL)=-4.69
K(Ho+2HL=HoL2+2H)=-0.68
*K(HoL2)=-4.09

Ho+++ sp NaClO4 21°C 2.00M U K1=2.72 B2=4.91 1981BMB (25461) 102
B3=6.17
B4=7.08

Ho+++ gl NaClO4 25°C 0.20M U K1=2.73 B2=5.03 1964DVA (25462) 103
K3=1.27
K4=0.67

Ho+++ gl NaClO4 20°C 0.10M U K1=3.021 B2=5.42 1964PKb (25463) 104
B3=6.83

Ho+++ gl NaClO4 25°C 2.0M U K1=2.71 B2=4.97 1961CCa (25464) 105
K3=1.58

C3H6O3 HL Methoxyacetic CAS 625-45-6 (29)
Methoxyethanoic acid; CH3.O.CH2.COOH

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

Ho+++ gl NaClO4 20°C 0.10M U K1=2.07 B2=3.22 1964PKa (25601) 106

C3H7NO2 HL Alanine CAS 56-41-7 (86)

2-Aminopropanoic acid; H2N.CH(CH3).COOH

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

Ho+++ gl KNO3 25°C 0.10M U K1=4.6 1967EMb (26190) 107

C3H7NO2S H2L Cysteine CAS 52-90-4 (96)
2-Amino-3-mercaptopropanoic acid; H2N.CH(CH2.SH)COOH

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

Ho+++ gl NaClO4 20°C 0.0 U T H K1=8.025 B2=15.82 1980SDc (26801) 108
Extrapolated from data for I=0.10-1.0 M. Data for 35 and 45 C.
DH(K1)=-14.4 kJ mol⁻¹, DS=104 J K⁻¹ mol⁻¹; DH(K2)=-23.0, DS(K2)=71.

C3H7NO3 HL Serine CAS 56-45-1 (49)
2-Amino-3-hydroxypropanoic acid; H2N.CH(CH2.OH)COOH

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

Ho+++ gl oth/un 25°C 0.10M U K1=4.00 1965PGe (27145) 109

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

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

Ho+++ gl NaClO4 22°C 0.10M U K(HoH-1L+H)=6.95 1972Mcd (27678) 110

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

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

Ho+++ gl NaClO4 22°C 0.10M U K(HoH-1L+H)-6.80 1972Mcd (27736) 111

Ho+++ gl NaCl 25°C 0.10M U K(HoH-1L+H)=6.85 1970PKe (27737) 112

C3H12N09P3 H6L NTPA CAS 6419-19-8 (2920)
Nitrilotris(methylenephosphonic acid); N(CH2PO3H2)3

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

Ho+++ gl KNO3 25°C 0.10M C K(HoL+H)=7.16 1991SKb (28572) 113
K(HoHL+H)=5.42

$$K(\text{Ho+HL})=1.93$$

 Ho+++ gl NaClO4 25°C 0.10M U K1=2.80 1973CDc (29203) 123

 C4H4O5 H2L Oxobutanedioic CAS 328-42-7 (1733)
 2-Oxosuccinic acid, Oxalacetic acid; HOOC.CH2.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.50M	M			K1=3.84 B2=7.33	1991MOa (29269)	124

C4H6O2		HL		Methylacrylic				(6992)		
2-Methylpropenoic acid; CH2:C(CH3)COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KCl	25°C	0.10M	U			K1=2.32	1995PAa (29699)	125

C4H6O4		H2L		Me-Malonic Acid				CAS 516-15-2	(816)	
Methylpropanedioic acid; HOOC.CH(CH3).COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KCl	25°C	0.20M	U			K1=4.28 B2=6.49	1975PLa (30127)	126

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
Ho+++	gl	KNO3	30°C	0.10M	U	M			1984AIa (30644)	127

K(Ho(EDTA)+L)=1.984										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KNO3	20°C	0.10M	U				1980SDa (30645)	128

B(HoHL)=7.36										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KNO3	20°C	0.10M	U			K1=4.61 B2=7.61	1980Sdb (30646)	129

K(Ho+HL)=1.05										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	U			K1=4.90 B2=8.25	1970RFa (30647)	130

C4H6O5		H2L		Diglycolic acid				CAS 110-99-6	(243)	
Di(carboxy)methyl ether, 2,2'-Oxydiethanoic acid; HOOC.CH2.O.CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KCl	25°C	1.0M	U	M			1988KTA (30882)	131

K(Ho(edta)+L)=1.65										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	EMF	NaClO4	20°C	1.00M	U			K1=5.40 B2=10.07	1972GOa (30883)	132

B3=13.46

Ho+++ cal NaClO4 25°C 1.0M C H 1963GRd (30884) 133
DH(K1)=6.657 kJ mol⁻¹, DS(K1)=124 J K⁻¹ mol⁻¹; DH(B2)=-1.09,
DS(B2)=187; DH(B3)=-18.34, DS(B3)=193.

Ho+++ EMF NaClO4 20°C 1.00M U K1=5.28 B2=9.95 1963GTa (30885) 134
B3=13.31

Method: quinhydrone electrode

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

Ho+++ sp oth/un 25°C 0.0 U T H K1=5.14 1975YBa (31276) 135
DH(K1)=3.8 kJ mol⁻¹, DS=112.9 J K⁻¹ mol⁻¹

Ho+++ gl alc/w 25°C 40% U I K1=5.04 1972SSj (31277) 136
Medium: 0-40% EtOH, 0.05 M. 40% EtOH, I=0: K1=0.46

Ho+++ gl KCl 24°C 0.20M U K1=3.38 1966DDa (31278) 137

C4H7NO4 H2L Aspartic acid CAS 56-84-8 (21)
Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH

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

Ho+++ gl NaClO4 30°C 0.10M U K1=5.68 B2=10.47 1984YLa (31869) 138

Ho+++ gl NaClO4 30°C 0.10M U K1=6.36 1973STb (31870) 139

Ho+++ gl KCl 25°C 0.10M U K1=5.91 B2=10.81 1968DRb (31871) 140

C4H7NO4 H2L IDA CAS 142-73-4 (118)
Iminodiethanoic acid; HN(CH2.COOH)2

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

Ho+++ gl KCl 25°C 1.0M U M 1988KTa (32275) 141
K(Ho(edta)+L)=3.89

Ho+++ EMF KCl 25°C 1.0M U M 1977GMa (32276) 142

K(HoA+L)=5.49
K(HoA+H2L)=1.18
K(HoA+H3L)=2.41

Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-
triethanoic acid.

Ho+++ sp none 25°C 0.0 U M 1974PLa (32277) 143

K(HoL+H2O2)=3.93

Ho+++ gl NaClO4 25°C 1.00M U K1=6.64 B2=11.97 1972GGa (32278) 144
B3=16.28
B(HoHL)=10.68
B(HoH2L)=12.83

Ho+++ cal KNO3 20°C 0.10M U HM 1971GKb (32279) 145
K(HoA+L)=3.54
DH(HoA+L)=-49.75 kJ mol⁻¹, DS=-34.3 J K⁻¹ mol⁻¹. DH(HoAL)=-35.56, DS=305.
H4A=EDTA

Ho+++ gl KNO3 25°C 0.10M U M K1=6.97 B2=12.47 1962THa (32280) 146
Ternary complexes with N-(2-hydroxyethyl)diaminoethane-triethanoic acid

C4H8N2O2 H2L Dimethylglyoxim CAS 95-45-4 (2032)
2,3-Butanedione dioxime, Dimethylglyoxime; CH3.(C:NOH).(C:NOH).CH3

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

Ho+++ gl diox/w 20°C 50% U K1=8.41 B2=15.90 1971MAF (32541) 147
Medium: 50% v/v dioxan, 0.1 M NaClO4

C4H8N2O3 HL Gly-Gly CAS 556-50-3 (54)
Glycyl-glycine; H2N.CH2.CO.NH.CH2.COOH

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

Ho+++ gl KCl 25°C 0.10M U K1=2.65 1973FMa (33031) 148

C4H8N2O4 H2L HDA CAS 19247-05-3 (1025)
Hydrazine-N,N'-diethanoic acid; HOOC.CH2.NH.NH.CH2.COOH

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

Ho+++ gl KCl 60°C 0.10M U K1=6.50 B2=11.06 1978NBa (33086) 149
B3=13.40

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

Ho+++ gl KNO3 30°C 0.10M U M 1984AIa (33107) 150
K(Ho(EDTA)+L)=2.357

C4H8O2 HL Isobutyric acid CAS 79-31-2 (573)
2-Methylpropanoic acid; CH3.CH(CH3).COOH

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

Ho+++ gl NaClO4 25°C 2.00M U H K1=1.63 B2=2.84 1965CGa (33232) 151
By calorimetry: DH(K1)=22.2 kJ mol⁻¹, DS=106 J K⁻¹ mol⁻¹; DS(K2)=10.9, DS=59

Ho+++ gl NaClO4 25°C 0.50M U K1=1.70 B2=2.92 1964SPa (33233) 152

C4H8O2S HL CAS 627-04-3 (3007)
S-Ethylthioethanoic acid; CH3.CH2.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++ gl NaClO4 31°C 2.0M U K1=1.43 B2=2.43 1963BCb (33407) 153

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
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Ho+++ gl NaClO4 25°C 0.20M U K1=2.98 B2=5.54 1964DVa (33479) 154
K3=1.9
K4=1.3

Ho+++ gl NaClO4 20°C 0.10M U K1=3.314 B2=5.98 1964PKb (33480) 155
B3=7.96

Ho+++ gl NaClO4 25°C 0.50M U K1=2.98 B2=5.42 1964SPa (33481) 156
B3=7.41

Ho+++ gl NaClO4 25°C 2.0M U K1=3.06 B2=5.65 1961CCa (33482) 157
K3=2.03

C4H8O4 HL CAS 21620-60-0 (2326)
2,3-Dihydroxy-2-methylpropanoic acid; HO.CH2.C(OH)(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++ gl KNO3 25°C 0.10M C K1=3.11 B2=5.56 1975PFb (33680) 158
K3=1.79

C4H8O5 HL CAS 56309-80-9 (2365)
2,3-Dihydroxy-2-hydroxymethylpropanoic acid; HO.CH2.C(CH2.OH)(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++ EMF KNO3 25°C 0.10M U K1=3.04 B2=5.49 1976PKb (33701) 159
K3=2.00

Ho+++ gl NaClO4 25°C 0.50M U K1=2.71 B2=4.89 1964SPa (33702) 160
B3=6.22

C4H9NO3 HL Threonine CAS 72-19-5 (48)
2-Amino-3-hydroxybutanoic acid; H2N.CH(CH(OH)).CH3)COOH

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

Ho+++ gl KNO3 25°C 0.0 M T H K1=5.39 2003MBa (34309) 161
K(Ho+HL=HoL+H)=-3.79

Extrapolated from data for I=0.07-0.32 M KNO3. DH(K1)=-62.7 kJ mol⁻¹,
DS(K1)=-107.9 J K⁻¹ mol⁻¹; DH(Ho+HL)=-9.0, DS(Ho+HL)=-102.8.

C4H11N L Butylamine CAS 109-73-9 (159)
1-Aminobutane; CH3.CH2.CH2.CH2.NH2

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

Ho+++ cal non-aq 25°C 100% U H K1=4.10 B2=7.39 1997CDa (34769) 162
B3=9.57
B4=11.08

Medium: MeCN. DH(K1)=-34.9 kJ mol⁻¹, DS=39, DH(B2)=-68.6, DS=89;
DH(B3)=-102, DS=159, DH(B4)=-123, DS=201

C4H11O4P HL (4276)
Diethylphosphoric acid; (C2H5O)2.PO.OH

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

Ho+++ oth oth/un 25°C U K1=2.00 1971MGb (35259) 163
Estimated

C4H12N2O L CAS 2752-17-2 (312)
Bis-(2-aminoethyl)ether; H2N.CH2.CH2.O.CH2.CH2.NH2

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

Ho+++ EMF non-aq 25°C 100% C H K1=2.3 2002CDb (35506) 164

Method: competitive reaction using Ag electrode. Medium: DMSO, 0.10 M
Et4NClO4. By calorimetry, DH(K1)=-12 kJ mol⁻¹, DS(K1)=3.7 J K⁻¹ mol⁻¹.

C4H13N3 L Dien CAS 111-40-0 (584)
1,4,7-Triazaheptane, 2,2'Iminobis(ethylamine), diethylenetriamine;
NH2.(CH2)2.NH.(CH2)2.NH2

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

Ho+++ EMF NaClO4 25°C 100% C H K1=6.19 B2=10.19 2000CDa (35791) 165

Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode.
By calorimetry: DH(K1)=-47.7, DH(B2)=-100.9 kJ mol⁻¹.

Ho+++ ISE non-aq 25°C 100% C H K1=3.70 B2=6.69 1993CCb (35792) 166

Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-32.2

kJ mol⁻¹, DS=-37; DH(B2)=-74.5, DS-122.

C5H2O5 H2L Croconic acid CAS 488-86-8 (1643)
4,5-Dihydroxycyclopent-4-ene-1,2,3-trione;

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

Ho+++ cal NaClO4 25°C 0.10M U H K1=2.90 B2=4.68 1978COa (35943) 167
DH(K1)=11.0 kJ mol⁻¹, DS=92.4; DH(K2)=4.68, DS=49.7

C5H4NO2Cl H2L CAS 53223-89-9 (5916)
5-Chloropyridine-2,3-diol;

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

Ho+++ gl diox/w 35°C 50% U K1=9.25 1984SSd (36033) 168

C5H4N2O2 HL CAS 98-97-5 (1879)
Pyrazine-2-carboxylic acid; cyclo(-CH:CH.N:C(COOH).CH:N-)

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

Ho+++ cal NaClO4 25°C 1.0M C H 1990YKb (36056) 169
DH(K1)=0.28 kJ mol⁻¹, DS(K1)=56.6 J K⁻¹ mol⁻¹.

Ho+++ EMF NaClO4 25°C 1.0M C K1=2.91 B2= 4.91 1983KKb (36057) 170
B3=6.83

Method: Pt/quinhydrone electrode.

C5H4O3 HL CAS 488-93-7 (1166)
Furan-3-carboxylic acid; C4H3O3.COOH

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

Ho+++ cal NaClO4 25°C 2.00M U H K1=1.50 1976YCa (36305) 171
DH=8.87 kJ mol⁻¹ and DS=58.58 J mol⁻¹ K⁻¹.

C5H6O4 H2L Itaconic acid CAS 97-65-4 (398)
Methylenesuccinic acid; HOOC.CH2.C(:CH2).COOH

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

Ho+++ gl KCl 25°C 0.20M U K1=2.66 1989MFa (37424) 172
K(Ho+HL)=1.64

C5H7NO3 HL (4313)
Isonitrosoacetylacetone; HO.N:CH.CO.CH2.CO.CH3

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

Ho+++ gl diox/w 20°C 50% U K1=5.14 B2=8.87 1971MAf (37527) 173
Medium: 50% v/v dioxan, 0.1 M NaClO4

C5H8N2O3 H2L (4317)

Methylacetyl glyoxime; CH3.C(:N.OH).C(:N.OH).CO.CH3

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

Ho+++ gl diox/w 20°C 50% U K1=6.04 B2=11.23 1971MAf (37704) 174

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

Ho+++ sp alc/w 18°C 60% U K1=7.00 B2=12.18 1998ZBa (37986) 175
K3=3.68

Medium: 60% EtOH/H2O, 0.1 M NaClO4

Ho+++ gl KCl 25°C 0.10M U K1=5.95 B2=10.56 1995PAa (37987) 176
K3=3.45

Ho+++ gl alc/w 30°C 75% U M B2=11.10 1991GDd (37988) 177
Medium: 75% v/v EtOH/H2O, 0.1 M NaClO4

Ho+++ dis NaClO4 25°C 1.0M C B2=9.93 1989ALa (37989) 178
B3=13.30
B4=15.23

Method: extraction of 166Ho from 1.0 M NaClO4 into benzene/HL.

Ho+++ gl NaClO4 20°C 0.10M U M 1973TZa (37990) 179
K(Ho(EDTA)+L)=3.65

Ho+++ gl R4N.X 25°C 0.10M U M 1972FGa (37991) 180
K(Ho(EDTA)+L)=2.87

Medium: NH4Cl. By spectroscopy, K=2.93

Ho+++ gl alc/w ? 50% U I K1=7.15 1971K0a (37992) 181
Medium: 5-80% MeOH, 0.005 HoCl3, 0.005 HL. K1(5%)=6.15, K1(80%)=8.38

Ho+++ ix NaClO4 30°C 0.10M U K1=5.65 B2=10.41 1964PRa (37993) 182

Ho+++ gl oth/un 30°C 0.10M U K1=6.05 B2=10.73 1960GFa (37994) 183
K3=3.40

C5H8O4 H2L CAS 601-75-2 (479)

Ethylpropanedioic acid; HOOC.CH(C2H5).COOH

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

Ho+++ gl KCl 25°C 0.20M U K1=5.36 1989ZPa (38243) 184
In 70.4% v/v EtOH/H2O: K1 = 6.43

C5H8O4 H2L CAS 498-21-5 (2234)

Methylsuccinic acid; HOOC.CH2.CH(CH3).COOH

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

Ho+++ gl NaClO4 25°C 0.10M U K1=3.08 B2=5.09 1970RFa (38262) 185

C5H8O7 H2L CAS 40120-71-6 (3022)

2,3,4-Trihydroxypentanedioic acid, Trihydroxyglutaric acid; HOOC.(CH(OH))3.COOH

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

Ho+++ gl KCl 24°C 0.20M U K1=3.82 1966DDa (38428) 186

C5H9NO2 HL Proline CAS 147-85-3 (44)

Pyrrolidine-2-carboxylic acid; C4H8N.COOH

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

Ho+++ gl NaClO4 25°C 0.10M U B2=5.75 1981ZLa (38622) 187

C5H9NO3 HL Hydroxyproline CAS 51-35-4 (416)

4-Hydroxy-2-pyrrolidinecarboxylic acid; C4H7N(OH)(COOH)

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

Ho+++ gl NaCl 37°C 0.15M U K1=3.61 1997GMa (38736) 188

Ho+++ gl NaClO4 25°C 0.10M U B2=5.38 1981ZLa (38737) 189

C5H9NO4 H2L Glutamic acid CAS 56-86-0 (22)

2-Aminopentanedioic acid; H2N.CH(CH2.CH2.COOH)COOH

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

Ho+++ gl KCl 25°C 0.1M C T H K1=4.57 1997FDa (39091) 190

B(HoHL)=11.36

Data also for 38.5 and 86.5 C

C5H9NO4 H2L MIDA CAS 4408-64-4 (190)

N-Methyliminodiethanoic acid; CH3.N(CH2.COOH)2

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

Ho+++ gl KCl 25°C 0.10M U K1=7.18 B2=13.10 1980MGc (39257) 191

B3=15.72

B(Ho+2OH+L)=18.46

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

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

Ho+++ gl KCl 25°C 0.10M U K1=2.45 1973FMa (39890) 192

C5H10N2O3 HL Gly-DL-Ala CAS 926-77-2 (66)
 Glycyl-DL-alanine; H₂N.CH₂.CO.NH.CH(CH₃).COOH

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

Ho+++ gl KCl 25°C 0.10M U K1=2.55 1973FMa (39939) 193

C5H10N2O4 HL Gly-Ser CAS 7361-43-5 (281)
 Glycyl-serine; H₂N.CH₂.CO.NH.CH(CH₂.OH).COOH

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

Ho+++ gl KCl 25°C 0.10M U K1=2.60 1973FMb (40103) 194

C5H10O3 HL CAS 3739-30-8 (3612)
 2-Hydroxy-2-methylbutanoic acid, Methylene glycolic acid; CH₃.CH₂.C(OH)(CH₃)COOH

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

Ho+++ gl KNO₃ 25°C 0.10M U K1=3.24 B2=5.87 1969PCa (40255) 195
 K3=1.85

 C5H10O3 HL CAS 617-31-2 (474)
 2-Hydroxypentanoic acid; CH₃.CH₂.CH₂.CH(OH).COOH

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

Ho+++ gl NaClO₄ 25°C 1.0M U K1=2.64 1968GCa (40280) 196

C5H10O4 HL CAS 4767-03-7 (4297)
 2,2-Bis(hydroxymethyl)propanoic acid; CH₃.C(CH₂OH)₂.COOH

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

Ho+++ gl NaClO₄ 25°C 0.10M U K1=2.28 B2=3.92 1970RDa (40298) 197

C5H10O4 HL CAS 19860-56-1 (2327)
 2,3-Dihydroxy-2-methylbutanoic acid; CH₃.CH(OH).C(OH)(CH₃).COOH

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

Ho+++ gl KNO₃ 25°C 0.10M C K1=3.03 B2=5.38 1975PFb (40313) 198

K3=1.34 (?)

C5H11NO2 HL Valine CAS 72-18-4 (43)
2-Amino-3-methylbutanoic acid; H2N.CH(CH(CH3)2)COOH

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

Ho+++ cal oth/un 25°C 0.03M U H K1=4.05 1981PBa (40720) 199

Ho+++ gl KCl 25°C 0.10M U T K1=4.10 1974BFa (40721) 200

C5H11NO2S H2L D-Penicillamine CAS 52-67-5 (1323)
D-2-Amino-3-mercapto-3-methylbutanoic acid; (CH3)2C(SH)CH(NH2)COOH

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

Ho+++ gl KCl 25°C 0.10M U 1996ADa (41189) 201

B(HoHL)=13.88

C6H5NO2 HL Picolinic acid CAS 98-98-6 (391)
2-Pyridine-carboxylic acid; C5H4N.COOH

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

Ho+++ gl KNO3 25°C 0.10M U K1=4.19 B2=7.77 1968PIa (42550) 202
K3=2.76
K4=1.95

Ho+++ gl KNO3 25°C 0.10M U K1=4.22 B2=7.72 1964THb (42551) 203
B3=10.7

C6H5NO2 HL Nicotinic acid CAS 59-67-6 (419)
3-Pyridine-carboxylic acid; C5H4N.COOH

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

Ho+++ gl NaClO4 25°C 0.20M U K1=1.63 1973FDa (42673) 204

C6H5NO4 H2L 4-Nitrocatechol CAS 3316-09-4 (890)
1,2-Dihydroxy-4-nitrobenzene; O2N.C6H3(OH)2

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

Ho+++ gl KNO3 25°C 0.10M U K1=9.69 B2=17.06 1981BDa (42929) 205

C6H5NO4 H2L CAS 3163-07-3 (2711)
2,4-Dihydroxy-1-nitrobenzene; O2N.C6H3(OH)2

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

Ho+++ sp KCl 25°C 0.10M M I K1=6.21 1989PEa (42954) 206

 C6H5O4Br L CAS 40838-32-2 (1084)
 6-Bromo-5-hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

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

Ho+++ sp KCl 25°C 0.10M U K1=5.49 1987PLa (43110) 207

 C6H5O4I L (1085)
 6-Iodo-5-hydroxy-2-hydroxymethyl-4H-pyran-4-one;

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

Ho+++ sp KCl 25°C 0.10M U K1=5.59 1987PLa (43152) 208

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

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

Ho+++ gl KNO3 25°C 0.05M M I K1=10.54 B2=20.34 1981BDc (43772) 209
 Also data for I=0.2 and 0.35 M. At I=0, K1=11.20, K2=10.30.

 Ho+++ gl NaClO4 25°C 0.10M U T K1=11.22 B2=21.22 1979NDa (43773) 210
 At 45 C, K1=10.51, K2=9.70. Medium ionic strength not stated.

 Ho+++ EMF NaCl 25°C 0.10M U K1=11.42 1969PKe (43774) 211

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

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

Ho+++ sp KCl 25°C 0.10M C I K1=6.230 1987PEa (44222) 212
 In 0.087 M KCl, K1=6.261.

 C6H6O6S H4L CAS 29714-59-8 (3688)
 2,3,4-Trihydroxybenzenesulfonic acid; (HO)3.C6H2.SO3H

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

Ho+++ sp oth/un ? 1.0M U K1=5.81 1966TKb (44308) 213
 Medium: KOH

 C6H6O8S2 H4L Tiron CAS 149-45-1 (104)
 4,5-Dihydroxybenzene-1,3-disulfonic acid; (HO)2.C6H2(SO3H)2

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

Ho+++ gl KNO3 25°C 0.10M U TIH K1=14.86 B2=28.97 1980BDd (44459) 214
Data for I=0.05-0.2 M and for I=0.10 M (35 C). Also DH and DS values.

Ho+++ gl NaClO4 25°C 0.50M C K1=12.88 B2=22.36 1976LAB (44460) 215
B(HoHL2)=30.00

Ho+++ gl NaClO4 25°C 0.10M U K1=14.39 1970SSi (44461) 216
K(Ho+HL)=5.42

C6H7N L Aniline CAS 62-53-3 (583)
Aminobenzene, aniline; C6H5.NH2

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

Ho+++ sp non-aq 25°C 100% U HM 1982KNa (44874) 217
K(HoA3+L)=1.98

Medium: CCl4. HA=dipivaloylmethane

C6H7NO HL 2-Aminophenol CAS 95-55-6 (2868)
2-Amino-1-hydroxybenzene; HO.C6H4.NH2

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

Ho+++ gl mixed 25°C 50% U I K1=4.23 B2=7.90 1969BCa (44931) 218
Medium: 50% DMSO, 0.12 M NaClO4. In 0.12 M NaClO4, 50% dioxan: K1=5.32,
K2=4.32. Medium: 0.12 NaClO4, 50% EtOH: K1=4.79, K2=3.92

C6H7N3O L Isonicotinic hy CAS 54-85-3 (1267)
Pyridine-4-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

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

Ho+++ gl NaClO4 15°C 0.10M U K1=9.00 1980ZMa (45128) 219

C6H8O4 H2L CAS 2583-25-7 (958)
2-Allylpropanedioic acid; HOOC.CH(CH2.CH:CH2).COOH

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

Ho+++ gl KCl 25°C 0.20M U K1=3.72 1989ZPa (45469) 220
In 70.4% v/v EtOH/H2O: K1 = 6.05

C6H8O6 H2L Ascorbic acid CAS 50-81-7 (285)
Ascorbic acid (Vitamin C);

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

Ho+++ gl NaClO4 25°C 2.00M U IH 1988HSa (45643) 221
K(Ho+HL)=1.41

DH=5.8 kJ mol⁻¹, DS=46.5 J K⁻¹ mol⁻¹

Ho+++ sp oth/un ? ? U 1966SAb (45644) 222
K(Ho+HL)=1.0

C6H8O6S H3L CAS 99-68-3 (3692)
(Carboxymethylthio)butanedioic acid; HOOC.CH(S.CH2.COOH).CH2.COOH

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

Ho+++ gl NaClO4 25°C 0.10M U TIH K1=4.75 B2=8.49 1986AJc (45697) 223
DH(K1)=-6.2 kJ mol⁻¹, DS=65.2 J K⁻¹ mol⁻¹; DH(K2)=-6.3, DS=51.0

Ho+++ gl NaClO4 30°C 0.10M U IH K1=4.50 B2=7.91 1983ASa (45698) 224
DH(K1)=-4.8 kJ mol⁻¹, DH(K2)=-4.4

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

Ho+++ gl KNO3 25°C 1.0M M 1986SZb (46133) 225
K(Ho+H3L=HoHL+2H)=-2.71
K(Ho+H3L=HoL+3H)=-5.94
K(Ho+H3L=HoH-1L+4H)=-11.71
K(Ho+2H3L=HoH2L2+4H)=-6.70

K(Ho+2H3L=HoL2+6H)=-14.23, K(Ho+2H3L=HoH-2L2+8H)=-28.9,
K(Ho+2H3L=HoH-3L2+9H)=-28.2, K(Ho+2H3L=HoH-4L2+10H)=-38.3.

Ho+++ gl KNO3 25°C 0.10M U M 1975TDa (46134) 226
B(Ho(IDA)L)=11.5

Ho+++ dis NaClO4 25°C 0.15M U 1973HHc (46135) 227
K(Ho+HL+L)=11.21

Ho+++ gl alc/w 25°C 25% U I K1=8.77 1972BKd (46136) 228
Medium: EtOH/H2O, 0.05 M (NaCl,NaClO4). 0%, K1=7.84, 50%, K1=9.92

Ho+++ dis oth/un ? ? U 1972PGd (46137) 229
K(Ho+HL+L)=10.28

Ho+++ sol NaClO4 25°C 0.10M U K1=7.9 1966SSg (46138) 230
Kso=-11.52

C6H8O7 H3L (6770)
Carboxymethoxysuccinic acid; HOOC.CH2.O.CH(COOH)CH2.COOH

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

Ho+++ EMF NaClO4 25°C 1.00M U K1=6.05 B2=9.99 1991WPb (46331) 231

C6H9N06 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

 Ho+++ ISE NaCl04 25°C 0.10M C I K1=11.70 1997LBb (46855) 232
 Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M.
 At I=0.0 M, K1=13.53.

 Ho+++ ISE KNO3 25°C 0.10M C K1=11.83 1980NSf (46856) 233
 Competitive method using Cd ion-selective electrode.

 Ho+++ gl KNO3 20°C 1.0M C K2=8.30 1978GHb (46857) 234

 Ho+++ EMF KCl 25°C 1.0M U M 1977GMa (46858) 235
 K(HoA+L)=6.18
 K(HoA+H2L)=1.63
 K(HoA+H3L)=2.24
 K(HoA+H4L)=3.45

Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.

 Ho+++ cal KNO3 20°C 0.10M U HM 1971GKb (46859) 236
 K(HoA+L)=3.95

H4A=EDTA. DH(HoA+L)=-33.72 kJ.mol-1, DS=-39.3 J K-1 mol-1.
 DH(HoLA)=-39.4 kJ mol-1, DS=300 J K-1 mol-1

 Ho+++ gl oth/un 20°C 0.20M U 1970VMa (46860) 237
 B(HoL)OH)=6.43

 Ho+++ gl KNO3 25°C 0.10M U T H T K1=11.90 B2=21.25 1962MFb (46861) 238
 15 C: K1=11.87,K2=9.52; 20 C: 11.85,9.41; 30 C:11.96,9.31; 35 C: 11.95,9.21;
 40 C: 12.00,9.19. DH(K1)=11.0 kJ mol-1,DS=264 J K-1 m-1; DH(K2)=-21.5,DS=106

 Ho+++ vlt KNO3 20°C 0.10M U 1957N0a (46862) 239
 B(Ho2L3)=37.68

C6H9N3O2 HL Histidine CAS 71-00-1 (1)
 2-Amino-3-(4'-imidazolyl)propanoic acid; H2N.CH(CH2.C3H3N2)COOH

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

Ho+++ cal oth/un 25°C 0.03M U H K1=4.03 1981PBa (47569) 240

C6H10O3 HL CAS 16841-19-3 (3649)
 1-Hydroxycyclopentanecarboxylic acid; HO.C5H8.COOH

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

Ho+++ gl NaCl04 25°C 0.10M U K1=3.021 B2=5.50 1966PRb (47990) 241

K3=1.87

K4=1.49

C6H10O6 H2L CAS 23243-68-7 (242)

1,2-Bis(carboxymethoxy)ethane; HOOC.CH2.O.CH2.CH2.O.CH2.COOH

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

Ho+++ oth NaClO4 25°C 0.10M U K1=4.51 1984AFa (48342) 242

Laser excitation spectroscopy, competition method.

C6H10O8 H2L Saccharic acid CAS 87-73-0 (1191)

D-2,3,4,5-Tetrahydroxy-1,6-hexanedioic acid, Glucaric acid; HOOC.(CHOH)4.COOH

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

Ho+++ gl NaClO4 25°C 0.10M U M K1=4.60 1997PPb (48477) 243

K(Ho(edta)+L)=4.17

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

Ho+++ gl KNO3 20°C 1.00M U K1=8.22 B2=16.17 1974CMd (48743) 244

K(HoL2(OH)+H)=10.08

Ho+++ oth NaNO3 20°C 0.10M U M K1=9.1 B2=17.15 1966JMc (48744) 245

Method: paper electrophoresis. Mixed complexes with HEDTA

Ho+++ vlt KCl 25°C 0.10M U B2=16.36 1965DTa (48745) 246

Ho+++ ISE KNO3 25°C 0.10M U K1=9.18 B2=17.31 1963TLa (48746) 247

C6H11N3O4 HL Gly-Gly-Gly CAS 556-33-2 (415)

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

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

Ho+++ gl KCl 25°C 0.10M U K1=2.35 1973FMa (48978) 248

C6H12N2O4 H2L EDDA CAS 5657-17-0 (119)

1,2-Diaminoethane-N,N'-diethanoic acid; HOOC.CH2.NH.CH2.CH2.NH.CH2.COOH

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

Ho+++ gl R4N.X 25°C 0.10M C K1=8.42 1988CCb (49245) 249

Ho+++ gl KNO3 25°C 0.10M U K1=8.42 B2=15.42 1962THb (49246) 250

C6H12O2 HL CAS 142-62-1 (964)
Hexanoic acid; CH3.(CH2)4.COOH

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

Ho+++ gl NaCl 20°C 0.10M U K1=2.53 1986GKb (49425) 251

C6H12O3 HL DiEtGlycolic CAS 3639-21-2 (421)
2-Ethyl-2-hydroxybutanoic acid; (C2H5)2.C(OH).COOH

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

Ho+++ EMF NaClO4 25°C 1.0M U K1=3.11 B2=5.25 1965TVa (49460) 252
K3=1.46
K4=0.7

Method: quinhydrone electrode

C6H12O3 HL CAS 92841-97-9 (3658)
2-Hydroxy-2,3-dimethylbutanoic acid; CH3.CH(CH3).C(OH)(CH3).COOH

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

Ho+++ EMF NaClO4 25°C 1.0M U K1=3.02 B2=5.37 1965TVa (49474) 253
K3=1.53
K4=1.34

Method: quinhydrone electrode

C6H12O4 HL CAS 1112-33-0 (1246)
2,3-Dihydroxy-2,3-dimethylbutanoic acid; (CH3)2.C(OH).C(OH)(CH3).COOH

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

Ho+++ gl KNO3 25°C 0.10M U K1=3.33 B2=5.83 1979PPa (49494) 254
K3=1.77

C6H12O7 HL Gluconic acid CAS 526-95-4 (904)
D-Gluconic acid, 2,3,4,5,6-Pentahydroxyhexanoic acid; HO.CH2(CHOH)4.COOH

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

Ho+++ EMF alc/w 25°C 80% U I K1=5.53 1966KRb (49724) 255
Medium: 80% MeOH. K1=4.62(50%)

Ho+++ gl KCl 25°C 0.20M U K1=2.36 B2=4.51 1963K0c (49725) 256

C6H13NO4 HL Bicine CAS 150-25-4 (2124)
N,N-Bis(2-hydroxyethyl)glycine; (HO.CH2.CH2)2N.CH2.COOH

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

Ho+++ gl KNO3 20°C 0.10M U K1=5.36 B2=10.37 1982RFa (50370) 257

Ho+++ gl KCl 30°C 0.10M U K1=5.51 B2=9.70 1973MSe (50371) 258

Ho+++ gl alc/w 20°C 50% U I K1=6.60 1970KRa (50372) 259
Medium: 0-80% MeOH, 0.03 M KCl. K1(0%)=5.43, K1(20%)=5.93, K1(80%)=7.84

Ho+++ oth NaNO3 20°C 0.10M U K1=7.6 B2=13.40 1966JMc (50373) 260
Method: paper electrophoresis

C6H13N3O3 HL Citrulline (579)
2-Amino-5-ureidovaleic acid; H2N.CO.NH.CH2.CH2.CH2.CH(NH2).COOH

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

Ho+++ gl NaCl 37°C 0.15M U M K1=3.11 1997GMa (50580) 261
B(HoHL)=10.76
B(HoH2AL)=24.36

Ligand is DL-citrulline. HA is L-hydroxyproline.

C6H18N4 L Tren CAS 4097-89-6 (817)
2,2',2''-Triaminotriethylamine; (H2N.CH2.CH2)3N

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

Ho+++ ISE non-aq 25°C 100% C H K1=5.31 B2=6.28 1993CCb (52200) 262
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-48.8
kJ mol⁻¹, DS=-62; DH(B2)=-75.3, DS=-132.

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

Ho+++ gl NaCl 37°C 0.15M C K1=13.32 1995JWa (52340) 263
K(HoL+H)=7.60
K(HoH2L+H)=5.17
K(HoHL+H)=6.33

Ho+++ gl NaCl 37°C 0.15M C K1=13.32 1995WJa (52341) 264
K(HoL+H)=7.60
K(HoH2L+H)=5.17
K(HoHL+H)=6.33

Ho+++ gl KNO3 25°C 0.10M C K(HoL+H)=7.32 1991SKb (52342) 265
K(HoHL+H)=6.07

Ho+++ gl KCl 25°C 0.10M U K1=21.85 1967KDa (52343) 266
K(Ho+HL)=17.15

K(Ho+H2L)=13.17
K(Ho+H3L)=10.38
K(Ho+H4L)=8.04

K(Ho+H5L)=4

C7H4N2O7 H2L CAS 609-99-4 (400)
3,5-Dinitrosalicylic acid; (O2N)2.C6H2(OH).COOH

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

Ho+++ gl oth/un 24°C 0.20M U K1=5.38 1972PSd (52485) 267
Medium: LiCl

C7H5N04 H2L Dipicolinic aci CAS 449-83-2 (418)
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2

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

Ho+++ cal NaCl04 25°C 0.50M C H 1963GRd (52780) 268
DH(K1)=-8.14 kJ mol-1, DS(K1)=139 J K-1 mol-1; DH(B2)=-25.80,
DS(B2)=219; DH(B3)=-56.72, DS(B3)=229.

Ho+++ EMF oth/un 20°C 0.50M U K1=8.72 B2=16.23 1961GRa (52781) 269
K3=5.85

C7H5N04 HL CAS 121-92-6 (490)
3-Nitrobenzoic acid; O2N.C6H4.COOH

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

Ho+++ gl NaCl04 25°C 0.10M C H K1=1.61 1986CLc (52867) 270
DH=7.6 kJ mol-1, DS=56 J K-1 mol-1

C7H5N04 HL CAS 62-23-7 (489)
4-Nitrobenzoic acid; O2N.C6H4.COOH

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

Ho+++ gl NaCl04 25°C 0.10M M H K1=1.62 1999YKa (52908) 271
By calorimetry: DH(K1)=8.10 kJ mol-1, DS(K1)=58.2 J K-1 mol-1.

C7H5O2F HL CAS 445-29-4 (5711)
3-Fluorobenzoic acid; F.C6H4.COOH

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

Ho+++ gl NaCl04 25°C 0.10M C H K1=1.70 1986CLc (53236) 272
DH=9.0 kJ mol-1, DS=63 J K-1 mol-1

C7H5O2F HL CAS 456-22-4 (5710)

4-Fluorobenzoic acid; F.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	C	H		K1=1.87	1986CLc (53256)	273

DH(K1)=10.7 kJ mol⁻¹, DS=72 J K⁻¹ mol⁻¹

 C7H5O6BrS H2L (1626)
 3-Bromo-5-sulfosalicylic acid; Br.C6H2(OH)(COOH).SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	C	T			1993ALa (53369)	274

B(1,1,1)=12.38
 B(1,0,1)=7.64
 B(1,0,2)=13.09
 B(1,-2,1)=-7.71

B(p,q,r); pHo+qH+rL=(Ho)pHqLr

C7H6O2 HL Tropolone CAS 533-75-5 (3129)
 2-Hydroxycyclohepta-2,4,6-trien-1-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KNO3	25°C	0.10M	U			K1=7.41 B2=13.61 K3=5.20 K4=3.77	1969CMb (53676)	275

 C7H6O2 HL Benzoic Acid CAS 65-85-0 (462)
 Benzenecarboxylic acid; C6H5.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	cal	NaClO4	25°C	0.10M	U	H		K1=2.01 B2=3.77	1982CBc (53838)	276

DH1= 10.4 kJ mol⁻¹, DS1= 73 J K⁻¹ mol⁻¹

 C7H6O3 H2L Salicylic acid CAS 69-72-7 (14)
 2-Hydroxybenzoic acid, Salicylic acid; HO.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.1M	C	H			1996HYa (54235)	277

By calorimetry: DH(K1)=3.05 kJ mol⁻¹, DH(B2)=7.30 J K⁻¹ mol⁻¹

Ho+++	gl	NaClO4	25°C	0.10M	C	T		K(Ho+HL)=1.83 K(HoHL+HL)=1.96	1989HMa (54236)	278
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Ho+++	gl	alc/w	25°C	100%	U			K1=6.27 B2=10.75 K3=3.51	1973BPd (54237)	279
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 C7H6O3 H2L CAS 99-06-9 (1370)
 3-Hydroxybenzoic acid; HO.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	C				1988LLa (54381)	280

K(Ho+HL)=1.96

 C7H6O3 H2L CAS 99-96-7 (1371)
 4-Hydroxybenzoic acid; HO.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	M	H		K1=1.72	1999YKa (54420)	281
By calorimetry: DH(K1)=11.41 kJ mol ⁻¹ , DS(K1)=71.2 J K ⁻¹ mol ⁻¹ .										
Ho+++	gl	NaClO4	25°C	0.10M	C				1988LLa (54421)	282
K(Ho+HL)=2.06										

 C7H6O6S H3L CAS 5965-83-3 (399)
 5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; HO3S.C6H3(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KNO3	20°C	0.10M	U	T		K1=8.13	1982DBa (55013)	283
Ho+++	gl	NaClO4	20°C	1.0M	U			K1=7.18 B2=12.98	1972CBb (55014)	284
Ho+++	sp	NaClO4	20°C	0.10M	U			K1=8.40 B2=15.15	1968KTb (55015)	285
K(Ho+HL)=2.23										

 C7H6O9S2 H3L CAS 56507-30-3 (2659)
 3,5-Disulfosalicylic acid; (HO3S)2.C6H2(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.50M	C		T	K1=8.77 B2=14.59	1976LAc (55097)	286

 C7H7NO2 HL Anthranilic CAS 118-92-3 (1589)
 2-Aminobenzoic acid, Anthranilic acid; H2N.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	C			K1=2.17 B2=6.39	1989HMa (55229)	287
Ho+++	gl	NaClO4	25°C	0.10M	U	H		K1=4.12	1982KYc (55230)	288
By calorimetry, DH(K1)=8.45 kJ mol ⁻¹ , DS(K1)=107.28 J K ⁻¹ mol ⁻¹ .										
Ho+++	gl	non-aq	25°C	100%	U			K1=7.35 B2=13.10	1970BBh (55231)	289

K3=3.56

K4=2.40

Medium: MeOH, 0.1 M NaCl

C7H7NO2 HL CAS 150-13-0 (1376)
4-Aminobenzoic acid; H2N.C6H4.COOH

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

Ho+++ gl NaClO4 25°C 0.10M M H K1=1.94 1999YKa (55382) 290
By calorimetry: DH(K1)=12.58 kJ mol⁻¹, DS(K1)=79.3 J K⁻¹ mol⁻¹.

Ho+++ gl KCl 25°C 0.20M U K1=2.29 1977EBa (55383) 291

C7H7NO6S H3L CAS 6201-86-1 (7899)
3-Amino-5-sulfosalicylic acid;

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

Ho+++ gl KCl 25°C 0.20M M T H K1=8.49 1991BPb (55689) 292
K(Ho+OH+L)=15.24

DH(K1)=-92 kJ mol⁻¹, DS(K1)=-147 J K⁻¹ mol⁻¹. DH(Ho(OH)L)=-156,
DS(Ho(OH)L)=-229. Also data for 35, 45 and 55 C.

C7H8O2 H2L Methylcatechol CAS 452-86-8 (525)
1,2-Dihydroxy-4-methylbenzene; CH3.C6H3(OH)2

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

Ho+++ gl mixed 25°C 50% U I K1=4.49 B2=8.72 1969BCb (56068) 293

Medium: 50% DMSO, 0.12 M LiClO4. In 50% dioxan, 0.12 M NaClO4: K1=5.76,
K2=4.49; 50% EtOH, 0.12 M NaClO4: K1=5.15, K2=4.09

C7H8O4 HL Methyl kojic CAS 1506-07-8 (2686)
3-Hydroxy-6-(hydroxymethyl)-2-methyl-4H-pyran-4-one;

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

Ho+++ sp KCl 25°C 0.10M M I K1=6.62 1986PLb (56128) 294

C7H8O5 HL CAS 2029-29-4 (2687)
3-Hydroxy-2,6-bis(hydroxymethyl)-4H-pyran-4-one;

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

Ho+++ sp KCl 25°C 0.10M M I K1=6.26 1986PLb (56147) 295

C7H10O4 H2L CAS 5802-62-3 (71)
Cyclopentane-1,1-dicarboxylic acid; C5H8.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	g1	KNO3	25°C	0.10M	U		K1=4.25 B2=6.74	1971PJb (56734)	296

C7H11N04		H2L					CAS 499-82-1	(3163)	
Piperidine-2,6-dicarboxylic acid; C5H9N(COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	g1	KNO3	25°C	0.10M	U		K1=6.32 B2=11.87	1963THb (56807)	297

C7H11N06		H3L					(2926)		
2-Aminobutanoic-N-propane-1,3-dioic acid; HOOC.CH(C2H5)NH.CH(COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	g1	KNO3	25°C	0.1M	U		K1=9.02	1982KKc (56846)	298

C7H11N06		H3L		MNTA			(1026)		
Nitrilo(2-propanoic)-diethanoic acid; HOOC.CH(CH3).N(CH2.COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	g1	KNO3	20°C	0.10M	U		K1=12.60 B2=22.18	1974RMg (56911)	299

C7H12N203		HL		Pro-Gly			CAS 2578-97-6	(262)	
Prolyl-glycine; C4H8N.CO.NH.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	g1	KCl	25°C	0.10M	U		K1=3.25	1973FMa (57150)	300

C7H1203		HL					CAS 609-69-8	(3731)	
2-Hydroxycyclohexanecarboxylic acid; HO.C6H10.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	g1	NaClO4	25°C	1.0M	U		K1=2.38 B2=4.67	1967STd (57263)	301

C7H1204		H2L					CAS 510-20-3	(482)	
Diethylpropanedioic acid (Diethylmalonic acid); HOOC.C(C2H5)2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	g1	KNO3	25°C	0.10M	U		K1=4.63 B2=7.16	1968PFa (57365)	302

C7H1206		HL		Quinic acid			CAS 77-95-2	(2578)	
1,3,4,5-Tetrahydroxycyclohexane-1-carboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ho+++ gl NaCl 20°C 0.10M U K1=2.94 1977SSc (57401) 303

Ho+++ EMF NaClO4 25°C 1.0M U K1=2.79 B2=4.93 19670Ta (57402) 304
K3=1.58
K4=0.94

Method: quinhydrone electrode

C7H13NO6 H2L CAS 32013-58-4 (6079)
N-(2,3-Dihydroxypropyl)iminodiethanoic acid; HO.CH2.CH(OH).CH2.N(CH2.COOH)2

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

Ho+++ gl KNO3 20°C 0.10M U K1=8.84 B2=16.80 1980RPa (57614) 305

C7H14N2O3S HL Gly-Met CAS 554-94-9 (726)
Glycyl-methionine; H2N.CH2.CO.NH.CH(CH2.CH2.S.CH3).COOH

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

Ho+++ gl KCl 25°C 0.10M U K1=2.60 1973FMa (57798) 306

C7H14O3 HL CAS 65311-45-1 (6266)
3-Hydroxy-3,4-dimethyl-pentanoic acid; CH3.CH2.C(OH)(CH3).CH(CH3).COOH

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

Ho+++ gl NaClO4 25°C 0.10M C K1=2.87 B2=4.73 1976SPa (57875) 307

C7H15NO4 HL CAS 41244-51-3 (4459)
N,N-Bis(2'-hydroxyethyl)alanine; (HO.CH2.CH2)2.N.CH(CH3)COOH

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

Ho+++ gl KNO3 20°C 0.10M U K1=5.10 B2=9.77 1982RFa (57937) 308

C8H5N5O6 H3L Murexide (453)
Purpuric acid (Murexide is ammonium salt);

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

Ho+++ sp non-aq 25°C 100% U K1=5.73 1983PSc (58507) 309
Medium: DMSO

Ho+++ sp alc/w 12°C 50% U 1972BLa (58508) 310

K(Ho+H2L)=4.43

Medium: 50% EtOH, 0.1 M NaClO4

Ho+++ sp KNO3 12°C 0.10M U 1965GEa (58509) 311

K(Ho+H2L)=3.71

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

Ho+++ cal non-aq 25°C 100% C H 2004MIa (58629) 312
Method: calorimetric titration. Medium: chloroform. DH(HoL3+A)=8.0 kJ
mol-1, DS=78 J K-1 mol-1; DH(HoL3+2A)=-1, DS=97. HA is benzoic acid.

Ho+++ gl alc/w 22°C 80% U K1=6.40 B2=12.29 1995MTa (58630) 313
K3=4.90

Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

Ho+++ gl mixed 25°C 50% U K1=5.91 1980SBc (58631) 314
Medium: 50% MeCN

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

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

Ho+++ gl NaClO4 30°C 0.10M U K1=3.97 B2=7.12 1966KPb (58975) 315

C8H6O4 H2L Isophthalic aci CAS 212-91-5 (1619)
Benzene-1,3-dicarboxylic acid; C6H4(COOH)2

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

Ho+++ cal NaClO4 25°C 0.10M U H K1=2.55 1982CBc (59054) 316
DH= 15.56 kJ mol-1, DS= 101 J K-1 mol-1

C8H7NO2 HL CAS 532-54-7 (4363)
Isonitrosoacetophenone, Phenylglyoxal 2-oxime;

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

Ho+++ gl diox/w 20°C 50% U K1=6.28 B2=11.92 1971MAf (59102) 317

Medium: 50% v/v dioxan, 0.1 M NaClO4

C8H7O2Cl HL CAS 1450-74-4 (6325)
2-Hydroxy-5-chloro-acetophenone; Cl(HO)C6H3.CO.CH3

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

Ho+++ gl alc/w 25°C 20% M TIH K1=6.425 2000KDa (59218) 318
K(Ho(egta)+L)=3.538

Medium contains 0.1 M NaNO3. Data for 0.05, 0.15 M NaNO3 and 35 and 45 C.
At I=0, K1=6.640, K(Ho(egta)+L)=3.715. DH(Ho(egta)L)=-16.8 kJ mol-1.

C8H8N2O2 HL Phenylglyoxime (3222)
Phenylglyoxime; C6H5.C(:N.OH).CH:N.OH

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

Ho+++ gl diox/w 20°C 50% U K1=7.36 B2=13.87 1971MAf (59337) 319
Medium: 50% dioxan, 0.1 M NaClO4

C8H8N4OS L (6097)
2-Acetylpyridinethiosemicarbazone; C5H4N.CO.CH:N.NH.CS.NH2

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

Ho+++ gl alc/w 25°C 75% C I K1=8.02 B2=15.70 1988GSa (59408) 320
In 75%(v/v) ethanol/water; 0.1 M NaClO4. I=0.2 M: K1=7.95, K2=7.59;
I=0.05 M: K1=8.15, K2=7.79; I=0.02 M: K1=8.26, K2=7.94

C8H8O2 HL 2-Acetylphenol CAS 118-93-4 (1888)
2-Hydroxyacetophenone; HO.C6H4.CO.CH3

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

Ho+++ gl alc/w 25°C 20% M TIH K1=6.791 2000KDa (59465) 321
K(Ho(egta)+L)=4.537

Medium contains 0.1 M NaNO3. Data for 0.05, 0.15 M NaNO3 and 35 and 45 C.
At I=0, K1=7.032, K(Ho(egta)+L)=4.748. DH(Ho(egta)L)=-20.0 kJ mol⁻¹.

C8H8O2 HL Phenylacetic CAS 103-82-2 (1361)
Phenylethanoic acid; C6H5.CH2.COOH

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

Ho+++ gl NaClO4 25°C 0.1M C H K1=1.77 1996HYa (59549) 322
By calorimetry: DH(K1)=15.08 kJ mol⁻¹

Ho+++ gl NaClO4 25°C 0.10M C H K1=1.77 1990HYa (59550) 323
By calorimetry: DH(K1)=15.1 J K⁻¹ mol⁻¹

C8H8O2 HL CAS 583-80-2 (3191)
beta-Methyltropolone;

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

Ho+++ sp alc/w ? 3% U K1=7.42 1967GDb (59598) 324
Medium: 3% EtOH, 0.2 M NaClO4

C8H8O3 H2L CAS 490-78-8 (6324)
2,5-Dihydroxyacetophenone; (HO)2C6H3.CO.CH3

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

Ho+++ gl alc/w 25°C 20% M TIH K1=6.560 2000KDa (59679) 325
K(Ho(egta)+L)=4.709

Medium contains 0.1 M NaNO3. Data for 0.05, 0.15 M NaNO3 and 35 and 45 C.
At I=0, K1=6.792, K(Ho(egta)+L)=4.925. DH(Ho(egta)L)=-19.3 kJ mol⁻¹.

C8H8O3 HL o-Anisic acid CAS 579-75-9 (2337)
2-Methoxybenzoic acid; CH3O.C6H4.COOH

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

Ho+++ gl NaClO4 25°C 0.10M M H K1=1.85 1988CLb (59736) 326
DH=10.6 kJ mol⁻¹, DS=71 J K⁻¹ mol⁻¹

Ho+++ gl alc/w 25°C 42% U K1=2.4 1983PMa (59737) 327

C8H8O3 HL Mandelic Acid CAS 611-72-3 (80)
2-Phenyl-2-hydroxyethanoic acid; C6H5.CH(OH).COOH

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

Ho+++ gl NaClO4 25°C 0.10M C K1=3.05 B2=5.35 1989HMa (59840) 328

Ho+++ gl NaClO4 25°C 2.0M U T K1=2.54 1972DCb (59841) 329

C8H8O3 HL m-Anisic acid CAS 586-38-9 (2804)
3-Methoxybenzoic acid; CH3O.C6H4.COOH

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

Ho+++ gl NaClO4 25°C 0.10M M H K1=1.97 1988CLb (59912) 330
DH=12.4 kJ mol⁻¹, DS=79 J K⁻¹ mol⁻¹

C8H8O3 HL p-Anisic acid CAS 100-09-4 (1373)
4-Methoxybenzoic acid; CH3O.C6H4.COOH

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

Ho+++ gl NaClO4 25°C 0.10M M H K1=2.04 1988CLb (59954) 331
DH=13.6 kJ mol⁻¹, DS=85 J K⁻¹ mol⁻¹

C8H8O4 HL CAS 520-45-6 (4478)
3-Acetyl-2-hydroxy-6-methylpyran-4-one, Dehydroethanoic acid;

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

Ho+++ gl diox/w 35°C 50% U K1=4.84 B2=8.83 1971MAa (60090) 332
Medium: 50% dioxan, 0.1 M NaClO4

C8H9NO4 H2L (4520)

Dehydroethanoic acid oxime;

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

Ho+++ gl diox/w 35°C 50% U 1971MAa (60496) 333

K(Ho+HL)=4.69

K(Ho+2HL)=8.52

Medium: 50% dioxan, 0.01 M NaClO4

C8H9N3O2 L CAS 7254-31-4 (1266)

Acylnicotinoyl hydrazide; C5H4N.CO.NH.NH.CO.CH3

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

Ho+++ gl NaClO4 25°C 0.10M U K1=13.90 B2=25.40 1980ZMa (60569) 334

C8H10N6O2S2 H2L (2746)

2,5-Dihydroxybenzoquinone bis-thiosemicarbazone;

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

Ho+++ gl diox/w 30°C 50% C TIH K1=4.43 B2=7.95 1989GDa (60815) 335

DH(K1)=-58.91 kJ mol⁻¹

C8H10O4 L CAS 34241-51-5 (5701)

3-Acetyl-6-methylhydropyrane-2,4-dione;

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

Ho+++ gl alc/w 22°C 20% U K1=4.78 B2=8.50 1988ZTa (60849) 336

K3=3.30

C8H10O5 H2L CAS 145-73-7 (138)

7-Oxa-bicyclo[2.2.1]-heptan-2,3-dicarboxylic acid;

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

Ho+++ gl KCl 30°C 0.10M C K1=5.87 B2=9.80 1996SZa (60869) 337

For the -5-en-2-exo isomer, K1=6.12, B2=10.87.

C8H11NO3 HL Vitamin B6 CAS 65-23-6 (254)

5-Hydroxy-6-methyl-3,4-pyridinedimethanol, Pyridoxine;

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

Ho+++ gl KCl 25°C 0.1M C K1=3.62 1999DNa (61120) 338

B(HoHL)=11.8

C8H11NO8 H4L CAS 7408-20-0 (2608)

Amino-di(butanedioic acid);HN(CH(COOH)CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KCl	25°C	0.10M	U			K1=11.78 B2=18.35 B(HoHL)=16.06	1979BEb (61209)	339

C8H11O4P		H2L						(4536)		
(alpha-Hydroxy-alpha-methylbenzyl)phosphonic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaCl	25°C	0.10M	U			K(Ho+HL)=2.86	1973BSg (61310)	340

C8H12N2O3		H2L		Barbital				CAS 57-44-3 (2744)		
5,5-Diethylbarbituric acid, Veronal, Barbitone;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	oth/un	25°C	0.10M	U			K1=2.450	1987TSb (61437)	341

C8H12N2O8		H4L						CAS 35039-85-1 (4537)		
1,2-Diaminoethane-N,N'-dimalonic acid; (HOOC)2.CH.NH.CH2.CH2.NH.CH(COOH)2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KNO3	20°C	0.10M	U			K1=12.53 B2=17.85	1975DPa (61508)	342

Ho+++	gl	KNO3	25°C	0.10M	U			K1=11.29	1972GBd (61509)	343
By polarography K1=11.26										

C8H12O4		H2L						CAS 1076-97-9 (2224)		
Cyclohexane-1,4-dicarboxylic acid; C6H10.(COOH)2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	M	H		K1=4.31	1986CDb (61710)	344
DH=16.6 kJ mol ⁻¹ , DS=142 J K ⁻¹ mol ⁻¹										

C8H13NO6		H3L						(3835)		
2-Amino-2-carboxypropane-N,N-diethanoic acid; HOOCC(CH3)2N(CH2COOH)2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KNO3	20°C	0.10M	U			K1=10.05 B2=17.42	1974RMg (61764)	345

C8H13NO6		H3L						(5681)		
2-Aminobutanoic-N,N-diethanoic acid; CH3CH2CH(COOH)N(CH2COOH)2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

Ho+++ gl KNO3 20°C 0.10M U K1=11.58 B2=20.10 1974RMg (61789) 346

C8H16N2O3 HL Gly-Leu CAS 869-19-2 (255)
Glycyl-leucine; H2N.CH2.CO.NH.CH(CH2.CH(CH3)2).COOH

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

Ho+++ gl KCl 25°C 0.10M U K1=2.60 1973FMa (62389) 347

C8H16N2O3 HL Leu-Gly CAS 686-50-0 (1248)
Leucyl-glycine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH2.COOH

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

Ho+++ gl KCl 25°C 0.10M U K1=2.40 1973FMa (62434) 348

C9H5NOI2 HL CAS 83-73-8 (3280)
5,7-Di-iodo-8-hydroxyquinoline;

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

Ho+++ gl diox/w 35°C 75% U K1=7.30 B2=13.45 1971MAb (63565) 349
K3=5.50

Medium: 75% v/v dioxan, 0.1 M NaClO4

C9H5NO4 HL CAS 22308-86-7 (4607)
3-Nitroso-4-hydroxycoumarin (oximidobenzotetronic acid);

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

Ho+++ sp diox/w 20°C 50% U K1=2.72 B2=4.64 1977MBb (63609) 350

C9H6NO4BrS H2L CAS 3062-37-1 (3889)
7-Bromo-8-hydroxyquinoline-5-sulfonic acid;

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

Ho+++ gl NaClO4 25°C 0.10M U K1=5.59 B2=10.48 1973MAa (63698) 351
K3=4.1

C9H6NO4IS H2L Ferron CAS 547-91-1 (275)
7-Iodo-8-hydroxyquinoline-5-sulfonic acid; (HO)(HO3S)C9H4NI

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

Ho+++ gl oth/un 20°C 0.10M U K1=6.40 1977SKd (63808) 352

C9H6N3OC1S HL CAS 27004-41-7 (216)
2-(2'-Thiazolylazo)-4-chlorophenol; C3H2NS.N:N.C6H3(Cl).OH

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

Ho+++ gl KNO3 25°C 0.10M U K1=8.24 1974KSa (63926) 353

C9H6O6 H3L Hemimellitic ac CAS 569-51-7 (1621)
1,2,3-Benzenetricarboxylic acid; C6H3.(COOH)3

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

Ho+++ gl NaClO4 25°C 0.10M U H K1=4.84 1994CRa (63970) 354
K(Ho+HL)=2.80
DH(K1)=21.6 kJ mol⁻¹; DS=165 J K⁻¹ mol⁻¹

C9H7N L CAS 91-22-5 (1538)
Quinoline;

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

Ho+++ gl NaClO4 25°C 0.5M M H K1=3.78 1991KBb (64063) 355
By calorimetry: DH(K1)=3.82 kJ mol⁻¹, DS(K1)=85.2 J K⁻¹ mol⁻¹.

C9H7NO HL Oxine CAS 148-24-3 (504)
8-Hydroxyquinoline (8-quinolinol);

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

Ho+++ sol none RT 0.0 U Kso(HoL3)=-31.89 1981FCa (64283) 356
Method: spectrophotometry.

Ho+++ gl oth/un 20°C 0.10M U K1=7.41 1977SKd (64284) 357

Ho+++ gl diox/w 30°C 50% U K1=9.24 B2=17.75 1970Gmb (64285) 358
Medium: 50% dioxan, 0.3 M NaClO4

C9H7NO2 HL CAS 1127-45-3 (4614)
8-Hydroxyquinoline-N-oxide;

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

Ho+++ gl diox/w 30°C 50% U K1=7.12 1970Gmb (64406) 359
Medium: 50% dioxan, 0.3 M NaClO4

C9H7NO4S H2L Sulfoxine CAS 84-88-8 (448)
8-Hydroxyquinoline-5-sulfonic acid;

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

Ho+++ cal KNO3 20°C 0.10M U HM 1971Gkb (64551) 360

K(HoA+L)=4.65

DH(HoA+L)=-23.7 kJ mol⁻¹, DS=8.36 J K⁻¹ mol⁻¹

DH(HoAL): DH=-29.38, DS=347.4. H4A=EDTA

C9H7N3O2S H2L TAR CAS 2246-46-0 (707)
4-(2'-Thiazolylazo)-resorcinol; C3H2NS.N:N.C6H3(OH)2

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

Ho+++ sp NaNO3 25°C 0.10M C K1=8.10 19850Hb (64708) 361
K(Ho+HL)=4.71
K(HoL+H)=6.05

C9H8O4 H2L CAS 97652-17-0 (3855)
3-Carboxy-4-methyltropolone;

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

Ho+++ sp NaClO4 ? 0.20M U K1=8.58 1967GDc (64942) 362
B(HoHL)=10.62

Ho+++ gl NaClO4 25°C 0.20M U K1=8.24 B2=15.00 1966GDa (64943) 363
K3=3.98

C9H8O4 H2L CAS 15872-28-3 (8407)
Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxylic acid;

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

Ho+++ gl KCl 30°C 0.10M U K1=4.22 B2= 7.99 1996Sza (64976) 364

C9H9O2Br HL CAS 56609-15-5 (1417)
3-Bromo-2-hydroxy-5-methyl-acetophenone; CH3.CO.C6H2(OH)(Br)CH3

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

Ho+++ gl diox/w 27°C 0.10M U K1=4.73 1982LMa (65161) 365

C9H10O3 HL Atrolactic acid CAS 940-31-8 (3859)
2-Hydroxy-2-phenylpropanoic acid; CH3.C(OH)(C6H5).COOH

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

Ho+++ gl NaClO4 25°C 1.0M U K1=2.97 B2=5.35 1966TVa (65439) 366
K3=1.92
K4=1.76

C9H10O3 HL CAS 1878-49-5 (1600)
2-Phenyl-2-methoxyethanoic acid; C6H5.CH(OCH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	C		K1=2.19 B2=3.85	1989HMa (65461)	367

C9H1003			HL				Tropic acid CAS 529-64-6 (1601)		
2-Phenyl-3-hydroxypropanoic acid; HO.CH2.CH(COOH)C6H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	C		K1=2.05 B2=4.02	1989HMa (65475)	368

C9H1004			H2L				(7232)		
Bicyclo[2.2.1]hept-5-en-2-endo,3-cis-dicarboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	KCl	30°C	0.10M	C		K1=4.16 B2=7.06	1996SZa (65572)	369

For the -2,5-dien-2-exo isomer, K1=4.22, B2=7.99.									
C9H1004			H2L				CAS 3853-88-1 (5687)		
endo-cis-Bicyclo-[2,2,1]-5-hepten-2,3-dicarboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	NaClO4	24°C	0.10M	U		K1=4.44 K(Ho+HL)=1.52	1986ZBa (65587)	370

C9H1005			H2L				CAS 54384-22-4 (8406)		
1-Methyl-(exo,exo)-7-oxabicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	KCl	30°C	0.10M	U		K1=5.29 B2= 8.04	1996SZa (65604)	371

C9H1005			H2L				(7233)		
1-Methyl-7-oxa-bicyclo[2.2.1]hept-5-en-2-exo,3-cis-dicarboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	KCl	30°C	0.10M	C		K1=5.29 B2=8.04	1996SZa (65619)	372

C9H1008			H4L				CAS 3724-52-5 (1264)		
cis-1,2,3,4-Cyclopentanetetracarboxylic acid; C5H6.(COOH)4									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	NaClO4	30°C	0.20M	U T		K1=10.62 K1=10.76 when T=40. K1=11.00 when T=50.	1979NSb (65645)	373

C9H11NO2 HL Phenylalanine CAS 63-91-2 (2)
2-Amino-3-phenylpropanoic acid; H2N.CH(CH2.C6H5)COOH

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

Ho+++ gl NaCl 25°C 0.15M U H K1=3.73 1992ZNa (65947) 374
By calorimetry: DH(K1)=3.95 kJ mol⁻¹, DS(K1)=84.66 J K⁻¹ mol⁻¹.

C9H12N2O10 H5L CAS 80921-06-8 (2924)
2,3-Diaminopropanoic-N,N'-di-1,3-propanedioic acid;
(HOOC)2CH.NH.CH(COOH).CH2.NH.CH(COOH)2

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

Ho+++ ISE KNO3 25°C 0.10M U K1=12.08 1983KBd (66738) 375
Hg-electrode.

C9H13NO6 H3L (3881)
2,6-Dicarboxypiperidyl-N-ethanoic acid;

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

Ho+++ gl KNO3 25°C 0.10M U K1=11.18 B2=19.35 1968TKe (66886) 376

C9H14N4O3 HL Carnosine CAS 305-84-0 (272)
3-Alanyl-histidine; H2N.CH2.CH2.CO.NH.CH(CH2.C3H3N2).COOH

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

Ho+++ nmr KCl 25°C 2.00M U K(Ho+H2L)=0.81 1983MAa (67319) 377

C9H15NO6 H3L (7177)
2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH2COOH)2

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

Ho+++ gl KNO3 20°C 0.10M U K1=11.47 B2=19.97 1974RMg (67408) 378

C9H16N2O6 H3L MEDTA CAS 40423-02-7 (5717)
N-Methyldiaminoethane-N,N',N'-triethanoic acid; HOOC.CH2.N(CH3)CH2.CH2.N(CH2.COOH)2

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

Ho+++ cal NaClO4 25°C 0.50M M IH K1=13.37 1986RCa (67639) 379
DH=-11.4 kJ mol⁻¹, DS=218 J K⁻¹ mol⁻¹

C9H16O4 H2L CAS 1636-27-7 (485)
Dipropylpropanedioic acid (Di-n-propylmalonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KNO3	25°C	0.10M	U			K1=4.72 B2=7.28	1968PFa (67773)	380

C10H5O2F7S		L						(6996)		
1-(2-Thienyl)-3-heptafluoropropylpropane-1,3-dione; C3F7.C(O)CH2C(O)C4H3S										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	alc/w	22°C	80%	U			K1=6.37 B2=11.73 K3=5.51	1995MTa (68427)	381
Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.										

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
Ho+++	gl	NaClO4	25°C	0.10M	U	H		K1=4.65 K(Ho+HL)=3.69	1994CRa (68516)	382
DH(K1)=28.8 kJ mol ⁻¹ , DS=181 J K ⁻¹ mol ⁻¹ ; DH(Ho+HL)=13.1, DS=115										

C10H7NO2		HL						CAS 131-91-9 (2668)		
1-Nitroso-2-naphthol, alpha-Nitroso-beta-naphthol;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	sp	KCl	25°C	0.10M	M	I		K1=4.33	1976PEa (68579)	383

C10H7NO2		HL						CAS 132-53-6 (2524)		
2-Nitroso-1-naphthol;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KNO3	25°C	0.10M	U			K1=5.94 B2=11.49	1982LPc (68647)	384

C10H7NO5S		H2L						CAS 14090-74-5 (2676)		
1-Nitroso-2-hydroxynaphthalene-7-sulfonic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KCl	25°C	0.10M	M			K1=4.32	1979LSb (68813)	385

C10H7NO5S		H2L						(4766)		
1-Nitroso-2-hydroxynaphthalene-6-sulfonic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	sp	KCl	25°C	0.10M	C			K1=4.40	1973PMb (68846)	386

C10H7NO5S H2L CAS 3682-32-4 (1812)
2-Nitroso-1-hydroxynaphthalene-4-sulfonic acid;

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

Ho+++ gl KCl 25°C 0.10M U I K1=3.13 1967MAi (68886) 387
K1=4.22(I=0)

C10H7NO5S H2L CAS 31005-79-9 (1814)
2-Nitroso-1-hydroxynaphthalene-8-sulfonic acid;

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

Ho+++ sp KCl 25°C 0.10M M K1=5.10 1978PPb (68946) 388

C10H7NO8S2 H3L Nitroso-R acid CAS 525-05-3 (1811)
1-Nitroso-2-hydroxynaphthalene-3,6-disulfonic acid;

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

Ho+++ gl oth/un 25°C 0.10M U K1=5.19 B2=9.98 1990ATa (69015) 389

Ho+++ gl KCl 25°C 0.10M U K1=4.70 1968MAe (69016) 390

C10H7N5O5 HL CAS 102964-51-2 (6212)
5-(2'-Nitrophenylazo)barbituric acid;

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

Ho+++ gl diox/w 25°C 75% U K1=5.85 B2=11.51 1986MIa (69097) 391

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

Ho+++ gl alc/w 22°C 80% U K1=7.45 B2=13.14 1995MTa (69151) 392
K3=6.00

Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

C10H8N2 L 2,2'-Bipyridyl CAS 366-18-7 (25)
2,2'-Bipyridine; (C5H4N)2

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

Ho+++ sp non-aq 25°C 100% C T K1=2.86 2005SYa (69588) 393
In ethylacetate; At 50 C K1=2.55

C10H8N4O3 HL CAS 43168-60-1 (6209)
5-Phenylazobarbituric acid;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  diox/w 25°C 75% U          K1=6.10  B2=11.90  1986MIa (69731) 394
*****
C10H8O2           H2L                      CAS 92-44-4 (1658)
2,3-Dihydroxynaphthalene;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  NaClO4 20°C 0.10M U    M          1973PAC (69771) 395
                      K(HoA+L)=7.89, H4A=EDTA
*****
C10H8O5S          H3L  DHNSA              (877)
2,3-Dihydroxynaphthalene-6-sulfonic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  NaClO4 25°C 0.50M C          K1=10.26 B2=18.40  1976LAd (69850) 396
                      B(HoHL2)=25.23
*****
C10H8O8S2         H4L  Chromotropic ac  CAS 148-25-4 (1875)
1,8-Dihydroxynaphthalene-3,6-disulfonic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  KCl      25°C 0.10M M  I          1974MLa (69955) 397
                      K(Ho+HL)=2.20
*****
C10H9N3OS         HL                      CAS 60321-26-8 (4671)
2-(2-Thiazolylazo)methylphenol; C3H2NS.N:N.C6H3(CH3)OH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     sp  diox/w 25°C 10% U          K1=9.61  B2=18.73  1973KSd (70362) 398
Medium: 10% dioxan, 0.1 M KNO3
*****
C10H9N3O2S        HL                      CAS 3012-52-0 (217)
2-(2'-Thiazolylazo)-4-methoxyphenol; CH3O.C6H3(OH).N:N.C3H2N2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     sp  KNO3    25°C 0.10M U          K1=9.63          1974KSA (70401) 399
*****
C10H10N4O2S       HL  Sulfadiazine      CAS 68-35-9 (1885)
4-Amino-N-(2-pyrimidinyl)benzenesulfonamide; C4H3N2NHSO2C6H4NH2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ho+++     gl  alc/w   25°C 50% C    M  K1=4.50          1993EEa (70611) 400
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K(Ho(NTA)+L)=7.22

Medium: 50% v/v EtOH/H₂O, 0.10 M NaClO₄.

Ho+++ gl NaNO₃ 25°C 0.10M U M 1988SSg (70612) 401

K(Ho(EDTA)+L)=3.23

C10H10O2 HL Benzoylacetone CAS 93-91-4 (197)
1-Phenylbutane-1,3-dione; C₆H₅.CO.CH₂.CO.CH₃

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

Ho+++ gl alc/w 25°C 80% U K1=8.41 B2=14.91 1967DZa (70735) 402
K3=4.50

Medium: 80% MeOH, 0.1 M NaCl

Ho+++ gl alc/w 24°C 80% U K1=8.41 B2=14.91 1967DZb (70736) 403
K3 = 4.50

Medium: 80% v/v MeOH/H₂O, 0.1 M NaCl

C10H10O6 H2L CAS 5411-14-3 (2394)
1,2-Phenylenedioxodiethanoic acid; C₆H₄(O.CH₂.COOH)₂

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

Ho+++ gl NaClO₄ 25°C 0.10M M K1=4.11 1977HCb (70852) 404

C10H11N₅O L CAS 105507-56-0 (8131)
N-Methylisatin-beta-amidinohydrazone;

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

Ho+++ gl diox/w 30°C 50% C TIH K1=6.10 B2=10.64 1986SGc (71091) 405

Medium: 50% v/v dioxan/H₂O, 0.10 M NaClO₄. Data for 0.02-0.20 M NaClO₄
and 30-50 C. DH(K₁)=75.6 kJ mol⁻¹, DS=366 J K⁻¹ mol⁻¹; DH(K₂)=79.5, DS=349

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

Ho+++ gl KNO₃ 25°C 0.10M U K1=9.07 B2=16.87 1964THa (71262) 406

C10H12O₂ HL CAS 1946-74-3 (202)
3-Isopropyltropolone;

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

Ho+++ gl alc/w 24°C 80% U K1=9.2 B2=16.90 1968DZb (71586) 407
K3=6.5
K4=5.2

Medium: 80% MeOH, 0.1 M NaCl

Ho+++ sp alc/w ? 3% U K1=7.40 1967GDb (71587) 408

Medium: 3% EtOH, 0.2 M NaClO4

C10H12O4 HL CAS 5936-18-9 (2743)

2-Hydroxy-3,4-dimethoxyacetophenone; (HO)(CH3O)2C6H2.CO.CH3

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

Ho+++ gl diox/w 15°C 50% C T H K1=9.75 B2=17.25 1987GBa (71653) 409

K1(35, 40, 50 C) = 8.39, 8.09, 7.88 respectively. DH(K1)=-100.6 kJ mol⁻¹

C10H16N2O8 H4L EDDS CAS 52759-67-8 (1100)

1,2-Diaminoethane-N,N'-di-1,4-butanedioic acid; (CH2.NH.CH(COOH)CH2.COOH)2

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

Ho+++ gl KCl 25°C 0.10M U K1=13.10 1980MMe (73142) 410

K(Ho+HL)=6.78

Ho+++ gl KNO3 20°C 0.10M U K1=13.75 B2=18.28 1975DPa (73143) 411

Ho+++ gl NaClO4 30°C 0.10M U K1=10.31 1973STb (73144) 412

Ho+++ vlt KNO3 25°C 0.10M U K1=13.60 1971BGb (73145) 413

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

Ho+++ cal NaClO4 25°C 0.10M C H 1987YJa (73860) 414

DH(K1)=-4.73 kJ mol⁻¹, DS(K1)=330 J K⁻¹ mol⁻¹.

Ho+++ gl KCl 25°C 1.0M U 1984BKc (73861) 415

K(HoL+H)=0.48

Ho+++ gl NaClO4 20°C 0.02M U M 1982MPd (73862) 416

K(HoL+PO4)=3.34

Ho+++ gl KCl 25°C 1.00M U K2=2.56 1976BKa (73863) 417

K(HoL+HL)=1.70

K(2HoL+L)=5.19

Ho+++ gl KCl 25°C 1.0M U 1976GMb (73864) 418

K(HoL+L)=1.35

Ho+++ sp KCl 25°C 0.10M U K2=2.56 1975BKa (73865) 419

K(2HoL+L)=5.19

K(HoL+HL)=1.70

Ho+++ EMF KCl 25°C 0.10M U T 1974BKb (73866) 420
K(HoL+H)=1.0

Ho+++ gl KCl 25°C 1.0M C K2=2.56 1974BKe (73867) 421
K(HoL+HL)=1.70
K(2HoL+L=Ho2L3)=5.19

Ho+++ gl KNO3 25°C 0.10M U T M 1973TRb (73868) 422
K(HoL+HA)=4.43
K(HoL+A)=6.50
K(HoL+HA)=4.55(2 C), K(35 C)=4.41, K(45 C)=4.35, K(HoL+A)=6.72(2 C),
K(35 C)=6.57, K(45 C)=6.47, H5A=tripolyphosphoric acid

Ho+++ gl KNO3 25°C 0.10M U T M 1973TRb (73869) 423
K(HoL+A)=5.6
K(2 C)=6.2, K(35 C)=5.8, K(45 C)=5.5, H4A=adenosine triphosphate

Ho+++ gl NaClO4 25°C 0.10M U M 1969AIb (73870) 424
K(HoL+A)=7.26, H4A=tiron

Ho+++ dis oth/un 25°C ? U K1=17.72 1969PJa (73871) 425
Method: paper electrophoresis. Medium: pH=1.86

Ho+++ ix KCl 25°C 0.10M U H K1=18.04 1959BDb (73872) 426
DH(K1)=5.2 kJ mol⁻¹, DS=363 J K⁻¹ mol⁻¹

Ho+++ gl oth/un 20°C 0.01M U K1=18.73 1955WSa (73873) 427
Also by polarography

Ho+++ gl KCl 20°C 0.10M U I T K1=18.1 1954SGa (73874) 428
By polarography, 0.1 M KNO3, K1=18.74

Ho+++ gl KCl 20°C 0.10M U I T K1=17.67 1953WSa (73875) 429
By polarography K1=18.05. In 0.1 M KNO3 K1=18.31

C10H16N5O13P3 H4L ATP CAS 56-65-5 (403)
Adenosine-5'-triphosphoric acid;

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

Ho+++ gl KCl 25°C 0.10M U K1=6.48 B2=10.35 1988SSd (74738) 430
K(Ho+HL)=4.12

Ho+++ kin oth/un 25°C 0.05M C K1=7.00 1983MCc (74739) 431
Method: inhibition of the hexokinase reaction, pH 8.0 (0.05 M TAPS).

Ho+++ gl KNO3 35°C 0.10M U M 1972TRc (74740) 432
K(Ho(EDTA)+L)=5.8

C10H17N2O10P H5L CAS 69219-70-1 (7961)
Bis{[bis(carboxymethyl)amino]methyl}phosphinic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaCl	25°C	0.16M	C			K1=15.8 K(Ho+HL)=8.8 K(HoL+H)=2.2 B(HoHL)=18.1	2001XRa (75023)	433

C10H17N3O6S H3L Glutathione CAS 70-18-8 (333)
Glutamyl-cysteinyglycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	25°C	0.10M	U	TIH		K1=7.502	2003GSb (75128)	434
Values for 0.05-0.2 M NaClO4, 15-45 C and 10-30% MeOH/H2O, 20% EtOH/H2O, 20% DMF/H2O. At I=0, K1=8.820. DH(K1)=-27.8 kJ mol-1, DS(K1)=-76.										

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
Ho+++	EMF	KCl	25°C	1.0M	U			K2=4.07 K(HoL+HL)=2.50 K(HoL+H4L)=1.91	1977GMa (75418)	435

Method: Pt/H2 electrode.

Ho+++	EMF	KCl	25°C	1.0M	U	M		K(Ho(edta)+L)=2.82 K(Ho(edta)+HL)=1.83 K(Ho(edta)+H2L)=1.54 K(Ho(edta)+H3L)=0.60	1977GMa (75419)	436
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Method: Pt/H2 electrode.

Ho+++	gl	NaClO4	25°C	1.0M	U			K2=3.39 K(HoL+HL)=2.47 K(HoL+H3L)=0.31	1973NMa (75420)	437
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Ho+++	gl	oth/un	20°C	?	U			K(HoL+H2L)=1.62 K(HoL+HL)=2.48 K(HoL+L)=4.0	1971MNa (75421)	438
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Ho+++	gl	KNO3	25°C	0.10M	U	M		K(HoL+A)=5.37 K(HoL+B)=4.76 K(HoLOH+H)=9.06	1963TLb (75422)	439
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H2A=iminodiethanoic acid, H2B=hydroxyethyliminodiethanoic acid

Ho+++ EMF oth/un 20°C 0.10M U K1=15.55 1962PMa (75423) 440

Ho+++ gl KNO3 15°C 0.10M U T H K1=15.39 1961MFb (75424) 441
K1=15.34(20 C), 15.32(25 C), 15.27(30 C), 15.35(35 C), 15.30(40 C)
DH(K1)=-4.8 kJ mol⁻¹(25 C), DS=277 J K⁻¹ mol⁻¹

Ho+++ gl KNO3 25°C 0.10M U K1=15.06 1956SPa (75425) 442
By polarography K1=15.4

C10H19N3O4 HL Leu-Gly-Gly CAS 1187-50-4 (1230)
Leucyl-glycyl-glycine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH2.CO.NH.CH2.COOH

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

Ho+++ gl KCl 25°C 0.10M U K1=2.0 1973FMa (75691) 443

C10H20N2O4 H2L (4753)
N,N'-Diethylethylenedinitrilo-N,N'-diethanoic acid;

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

Ho+++ gl KNO3 25°C 0.10M U K1=6.9 1973PSb (75783) 444

C10H22O5 L Tetraglyme CAS 143-24-8 (121)
2,5,8,11,14-Pentaoxapentadecane; (CH3.O.CH2.CH2.O.CH2.CH2.)20

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

Ho+++ ISE non-aq 25°C 100% C K1=3.60 1986BDa (76449) 445
Medium: propylene carbonate, 0.1 M Et4NC104

C11H8O3 L CAS 1133-72-8 (2614)
2-Aceto-1,3-indandione;

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

Ho+++ gl diox/w 30°C 75% U T K1=3.94 B2=7.78 1984APa (77034) 446

Ho+++ gl mixed 22°C 60% U K1=3.98 B2=7.58 1979JMa (77035) 447
K3=3.22

Medium: 60% acetone/H2O

C11H8O4 HL CAS 7555-37-5 (4812)
3-Acetyl-4-hydroxycoumarin

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

Ho+++ gl diox/w 35°C 50% U K1=4.09 B2=7.17 1971MAa (77178) 448

Medium: 50% dioxan, 0.01 M NaClO4

C11H8O6S H3L CAS 66695-90-7 (1996)

1-Hydroxy-4-sulfo-2-naphthoic acid;

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

Ho+++ gl NaClO4 25°C 0.10M C K1=8.82 B2=15.17 1979LAb (77228) 449
K(Ho+HL)=2.10

C11H8O6S H3L CAS 15509-36-1 (2658)

3-Hydroxy-7-sulfo-2-naphthoic acid;

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

Ho+++ gl NaClO4 25°C 0.10M C K1=7.62 1976MLb (77253) 450
K(Ho+HL)=2.21

C11H8O9S2 H4L CAS 67097-84-1 (1995)

1-Hydroxy-4,7-disulfo-2-naphthoic acid;

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

Ho+++ cal NaClO4 25°C 0.10M C H K1=8.86 B2=14.7 1986LLc (77281) 451
K(Ho+HL)=1.92

DH(Ho+HL)=8.4 kJ mol⁻¹, DS=65 J K⁻¹ mol⁻¹

C11H9NO4 H2L PAR CAS 4321-82-7 (4829)

3-Acetyl-4-hydroxycoumarin oxime;

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

Ho+++ gl diox/w 35°C 50% U 1971MAa (77421) 452
K(Ho+HL)=3.82
K(Ho+2HL)=6.69

Medium: 50% dioxan, 0.01 M NaClO4

C11H9N3O2 H2L PAR CAS 1141-59-9 (636)

4-(2'-Pyridylazo)-1,3-dihydroxybenzene; C5H4N.N:N.C6H3(OH)2

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

Ho+++ sp NaNO3 25°C 0.10M C K1=10.47 1984OHa (77549) 453
K(Ho+HL)=4.29
*K(HoHL)=-6.12

Medium pH 4.8-6.3.

Ho+++ sp KCl 20°C 0.10M U 1971EKa (77550) 454
K(Ho+HL)=3.60

C11H10N4O3 HL CAS 92265-24-2 (6211)
5-(2'-Methylphenylazo)barbituric acid;

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

Ho+++ gl diox/w 25°C 75% U K1=6.24 B2=12.04 1986MIa (77730) 455

C11H10N4O4 HL CAS 92265-26-4 (6210)
5-(2'-Methoxyphenylazo)barbituric acid;

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

Ho+++ gl diox/w 25°C 75% U K1=6.35 B2=12.42 1986MIa (77744) 456

C11H11N3O5 H2L CAS 16247-80-6 (1150)
2-(2'-Thiazolylazo)-4-ethylphenol; C4H2NS.N:N.C6H3(C2H5).OH

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

Ho+++ sp KNO3 25°C 0.10M U T H K1=9.90 1975KSa (77905) 457
DS=120.9 J K-1 mol-1 and DH=-20.5 kJ mol-1. Data also at 15 C and 35 C

C11H11N3O2S HL Sulfapyridine CAS 144-83-2 (8356)
4-Amino-N-2-pyridinyl-benzenesulfonamide;

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

Ho+++ gl alc/w 25°C 50% C M K1=10.05 B2=18.75 1993EEa (77931) 458
K(Ho(nta)+L)=7.21

Medium: 50% v/v EtOH/H2O, 0.10 M NaClO4.

C11H12N2O2 HL CAS 103314-23-4 (6182)
2-(N-2-Pyrrolidimino)benzoic acid; C4H7N:N.C6H4.COOH

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

Ho+++ gl NaClO4 25°C 0.10M U TIH B2=14.10 1986GSb (78018) 459
35 C: B2=14.17; 45 C:B2=14.82. DH(B2)=-65.3 kJ mol-1, DS=59 J K-1 mol-1

C11H12N2O2 HL Tryptophan CAS 73-22-3 (3)
2-Amino-3-(3-indolyl)propanoic acid; H2N.CH(CH2.C8H6N)COOH

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

Ho+++ gl KCl 25°C 0.10M U T H K1=4.86 1976BFc (78211) 460
For 55C K1= 4.40

C11H12N2O5 HL CAS 56475-09-3 (8410)
3-(4'-Sulfophenylhydrazo)-pentane-2,4-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	oth/un	30°C	0.10M	U		B2=21.87	1985EEb (78321)	461
Medium: not stated. For 3'-sulfophenylhydrazo-, B2=21.98; for 2'-sulfo-phenylhydrazo-, B2=23.94; for 4'-methyl-2'-sulfophenylhydrazo-, B2=23.52.									

C11H12N4O5		H2L					CAS 3695-43-0	(1149)	
2-(2'-Thiazolylazo)-5-methyl-aminophenol;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	sp	KNO3	25°C	0.10M	U T H		K1=11.12	1975KSa (78348)	462
DH=-15.4 kJ mol ⁻¹ and DS=161.4 J K ⁻¹ mol ⁻¹ . Data also at 15 C and 35 C									

C11H12N4O2S		HL				Sulfamerazine	CAS 127-79-7	(8431)	
4-Amino-N-(4-methyl-2-pyrimidinyl)benzenesulfonamide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	alc/w	25°C	50%	C		K1=10.42 B2=18.46 K(Ho(nta)+L)=3.80	1993EEa (78357)	463
Medium: 50% v/v EtOH/H2O, 0.10 M NaClO4.									

C11H13NO4S		HL					CAS 58943-48-9	(1411)	
N-Acetylacetylidene-orthanilic acid; H03S.C6H4.N:C(CH3).CH2.CO.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	EMF	NaClO4	25°C	0.10M	U		K1=20.10	1982MSc (78592)	464

C11H13NO5		H3L				HBIDA	CAS 7372-13-6	(1603)	
N-(2-Hydroxybenzyl)iminodiethanoic acid; H0.C6H4.CH2.N(CH2.COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	KNO3	25°C	0.10M	C		K1=14.14 B2=25.30 K(Ho+HL)=5.97 K(Ho+2HL)=12.48	1989YSa (78628)	465

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	KNO3	20°C	0.10M	U		K1=14.24 B2=25.20	1983MSc (78629)	466

C11H14N2O3		HL				Gly-Phe	CAS 3321-03-7	(829)	
Glycyl-phenylalanine; H2N.CH2.CO.NH.CH(CH2.C6H5).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	KCl	25°C	0.10M	U		K1=2.45	1973FMa (78814)	467

C11H14N2O4		H2L					(1880)		
N-(6-Methyl-2-pyridylmethyl)iminodiethanoic acid; CH3C5H3NCH2N(CH2COOH)2									

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  KNO3   25°C 0.10M U      K1=7.30  B2=12.33  1964THa (78885) 468
*****
C11H18N2O8      H4L      PDTA      CAS 4408-81-5 (1655)
1,2-Diaminopropane-N,N,N',N'-tetraethanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      vlt KNO3   20°C 0.10M U      K1=15.08      1981NSc (79295) 469
-----
Ho+++      EMF KNO3   25°C 0.10M U      K1=16.37      1980KBc (79296) 470
-----
Ho+++      vlt KNO3   20°C 0.10M U      K1=19.36      1978NLb (79297) 471
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Ho+++      vlt KNO3   20°C 0.10M U      K1=19.30      1964ICb (79298) 472
*****
C11H18N2O8      H4L      CAS 38539-29-0 (2573)
1,3-Diaminopropane-N,N'-di(1,4-butanedioic acid)
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  KNO3   25°C 0.10M U      K1=10.76      1976GKd (79366) 473
*****
C11H18N2O9      H4L      HDPTA     CAS 3148-72-9 (431)
1,3-Diamino-2-hydroxypropane-N,N,N',N'-tetraethanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  KNO3   25°C 0.10M M      K1=14.88      1986PLc (79560) 474
*****
C11H18N2O9      H4L      CAS 668-21-1 (2562)
2-Hydroxy-1,3-diaminopropane-N,N'-di(1,4-butanedioic) acid
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  KNO3   25°C 0.10M U      K1=11.96      1976GKd (79597) 475
*****
C11H20O4      H2L      CAS 2283-16-1 (2854)
2,2-Dibutylpropanedioic acid; HOOC.C(C4H9)2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  KNO3   25°C 0.10M U      K1=4.69  B2=7.36  1968PFa (79769) 476
*****
C12H7O2F7      L      (6994)
1-Heptafluoropropyl-3-phenylpropane-1,3-dione; C3F7.CO.CH2.CO.C6H5
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ho+++ gl alc/w 22°C 80% U K1=6.29 B2=11.73 1995MTa (80184) 477
K3=5.23

Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

C12H8N2 L Phenanthroline CAS 66-71-7 (144)

1,10-Phenanthroline;

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

Ho+++ dis non-aq 25°C 100% C HM 1998YHa (80468) 478

K(HoA3+L)=7.82

Method: solvent extraction from 0.10 M NaClO4 into CHCl3. HA is
1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedione. DH(HoA3+L)=-6.1 kJ mol⁻¹.

C12H9N2OCl HL CAS 73446-98-7 (9081)

N-2-(5-Chloropyridyl)salicylaldimine;

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

Ho+++ gl alc/w 25°C 50% C T H K1=5.28 B2= 8.61 1997GSa (80586) 479

Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=4.89, K2=3.06.

DH(K1)=-29 kJ mol⁻¹.

C12H10N2O HL CAS 1823-47-8 (3969)

2-Salicylideneaminopyridine; (2-OH).C6H4.CH:N.C5H4N

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

Ho+++ gl alc/w 25°C 50% C T H K1=6.25 B2=10.82 1997GSa (80673) 480

K3=3.31

Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=5.79, K2=4.22,

K3=3.05. DH(K1)=-34 kJ mol⁻¹.

C12H10N2O HL CAS 3860-58-0 (9082)

2-[(2-Pyridylmethylene)amino]phenol;

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

Ho+++ gl alc/w 25°C 50% C K1=7.30 B2=13.38 1997GSa (80683) 481

Medium: 50% v/v EtOH/H2O, 0.20 M KCl.

C12H10N2S L CAS 19257-96-6 (9084)

2-(2-Pyridyl)benzothiazoline;

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

Ho+++ gl alc/w 25°C 50% C K1=7.02 B2=12.73 1997GSa (80741) 482

Medium: 50% v/v EtOH/H2O, 0.20 M KCl.

C12H11N3O2 HL CAS 50536-09-5 (6323)
2-Hydroxy-1-naphthaldehyde-semicarbazone; HO.C10H6.CH:N.NH.CO.NH2

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

Ho+++ gl diox/w 20°C 75% U I K1=9.581 B2=17.557 1992SSc (80918) 483
Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4

C12H12NO3Cl HL (1055)
2-Chloro-4-dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H3Cl.CH:CH.CO.COOH

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

Ho+++ sp NaClO4 25°C 0.50M U K1=2.029 1987MSa (80967) 484

C12H12N2O3 HL Nalidixic acid CAS 389-08-2 (1401)
1-Ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridine-3-carboxylic acid;

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

Ho+++ gl alc/w 22°C 0.1M U K1=6.47 B2=12.12 2000TBb (81074) 485
K3=4.28
Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O

C12H13NO3 HL (1054)
4-Dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H4.CH:CH.CO.COOH

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

Ho+++ sp NaClO4 25°C 0.50M U K1=2.200 1987MSa (81197) 486

C12H13NO8 H5L (7001)
3-Bis-(carboxymethyl)iminomethyl-2,4-dihydroxybenzoic acid;
HOOC.C6H2(OH)2CH2.N(CH2COOH)2

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

Ho+++ gl KCl 25°C 0.10M U K(Ho+H2L)=8.4

C12H14N4O2S L Sulfadimidine CAS 57-68-1 (6167)
2-(4-Aminobenzolsulfamido)-4,6-dimethylpyrimidine;

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

Ho+++ gl NaNO3 25°C 0.10M U M 1988SSg (81369) 488
K(Ho(EDTA)+L)=3.25

C12H15NO5 H3L (4930)
1-Hydroxy-4-methylphenyl-2-methyleneiminodiethanoic acid;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  KCl    25°C 0.10M U      K1=13.1      1977RTb (81497) 489
                K(Ho+HL)=8.5
*****
C12H18N2O5S          H2L          CAS 80459-15-0 (1595)
2-Nitroso-5-(N-propyl-3-sulfopropylamino)phenol;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  KNO3   25°C 0.10M C      K1=5.86      1988YSa (81813) 490
*****
C12H18N2O8          H2L          CAS 93031-52-8 (5829)
1,4-Dioxa-7,10-diazacyclododecane-5,12-dione-7,10-diethanoic acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  R4N.X  25°C 0.10M C      K1=6.30      1988CCb (81837) 491
*****
C12H18N2O8          H4L          CAS 76079-31-7 (2587)
trans-1,2-Diaminocyclohexane-N,N'-di(propanedioic acid)
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     EMF KNO3  25°C 0.10M U      K1=14.09     1985SGa (81867) 492
-----
Ho+++     EMF KNO3  25°C 0.10M U      K1=15.62     1980SGb (81868) 493
*****
C12H20N2O8          H4L          CAS 1798-13-6 (4935)
1,2-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH2.CH(C2H5).N(CH2.COOH)2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     vlt KNO3  20°C 0.10M U      K1=19.80     1968NLa (82026) 494
*****
C12H20N2O8          H4L          CAS 40623-42-5 (1101)
1,2-Diaminoethane-N,N'-di(2-pentane-1,5-dioic acid); (CH2NHCH(COOH)CH2CH2COOH)2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  KNO3   20°C 0.10M U      K1=9.24      B2=13.94     1975DPa (82076) 495
-----
Ho+++     gl  KNO3   25°C 0.10M U      K1=8.90      1973GBd (82077) 496
-----
Ho+++     gl  NaClO4 30°C 0.10M U      K1=8.46      1973STb (82078) 497
*****
C12H20N2O8          H4L          CAS 61368-60-3 (3389)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-propanoic acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      vlt KNO3   20°C 0.10M U          K1=18.27      1976NKa (82135) 498
*****
C12H20N2O8      H4L          CAS 40623-42-5 (3388)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-dipropanoic acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  NaClO4  25°C 0.10M U  IH    K1=13.84      1988RNa (82167) 499
                      B(Ho+HL)=6.37
DH(K1)=2.78 kJ mol-1, DH(Ho+HL)=33.4, DS(K1)=274 J K-1 mol-1
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-----
Ho+++      vlt R4N.X  30°C 0.01M C          K1=15.96      1981GMh (82168) 500
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.
*****
C12H20N2O8      H4L          CAS 2458-58-4 (922)
1,4-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.(CH2)4.N(CH2.COOH)2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  NaClO4  25°C 0.50M M   H     K1=10.84      1985CBa (82225) 501
                      K(HoL+H)=6.25
                      K(HoHL+H)=5.01
DH(K1)=24.7 kJ mol-1, DS=290 J K-1 mol-1 (by calorimetry)
*****
C12H20N2O8      H4L      BDTA          CAS 868-43-9 (1742)
DL-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      sp  NaClO4  20°C 0.10M U          K1=19.97      1971ISa (82307) 502
-----
Ho+++      vlt oth/un 20°C 0.10M U          K1=20.27      1966DMa (82308) 503
-----
Ho+++      vlt KNO3   20°C 0.10M U          K1=20.27      1966NSb (82309) 504
*****
C12H20N2O8      H4L          CAS 22968-57-6 (3992)
meso-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      sp  NaClO4  20°C 0.10M U          K1=17.36      1971ISa (82401) 505
-----
Ho+++      vlt oth/un 20°C 0.10M U          K1=17.25      1966DMa (82402) 506
*****
C12H20N2O8S     H4L      TEDTA          CAS 923-74-0 (3394)
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2,2'-Thiobis(ethyliminodiethanoic acid); S(CH2.CH2.N(CH2.COOH)2)2

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

Ho+++ gl KNO3 25°C 0.10M C K1=14.67 1985TPa (82461) 507

C12H20N2O9 H4L EEDTA CAS 923-73-9 (2112)
Oxa-bis(ethyleneimino)diethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2O

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

Ho+++ EMF KNO3 20°C 0.10M U K1=18.13 1962MMc (82543) 508

C12H20O8N2 H4L (6908)
2-Methyl-1,2-diaminopropane-N,N,N'N'-tetraethanoic acid;
(HOOC.CH2)2N.CH2.C(CH3)2.N(CH2.COOH)2

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

Ho+++ vlt KNO3 20°C 0.10M C K1=17.40 1978NLa (82676) 509

C12H21NO6 H3L (7209)
1-Carboxy-1-aminoheptane-N,N-diethanoic acid; HOOC.CH(C6H13)N(CH2.COOH)2

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

Ho+++ gl alc/w 20°C 40% U K1=11.53 1985LBc (82698) 510
Medium: 40% v/v MeOH/H2O, 0.1 M KNO3

C12H24N4O4 H2L (7343)
1,4,7,10-Tetraazacyclododecane-1,7-bis(ethanoic acid);

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

Ho+++ gl R4N.X 25°C 0.10M C K1=13.00 1998CCb (83085) 511

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

Ho+++ gl alc/w 25°C 100% C K1=8.81 1983ANb (83845) 512
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NC104

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

Ho+++ gl non-aq 25°C 100% C K1=4.66 1989BPa (84000) 513

Medium: anhydrous propylene carbonate, 0.1 M Et4NC104

C12H28N2O9P2 H4L (7242)
1,4,10-Trioxa-7,13-diazacyclopentadecane-7,13-diylldimethylenediphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	R4N.X	25°C	0.10M	U			K1=12.98 K(Ho+HL)=9.75 K(Ho+H2L)=5.59	1996BJa (84157)	514

Medium: 0.1 M Me4NCl

C12H30N6 L CAS 296-35-5 (143)
1,4,7,10,13,16-Hexaazacyclooctadecane; cyclo(-(NH.CH2.CH2)6-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaNO3	25°C	0.20M	C			K1=8.62	1991KKa (84333)	515
Ho+++	gl	NaCl	20°C	0.10M	C			K1=10.1	1988Sjb (84334)	516

C13H502F13S L (6997)
1-(2-Thienyl)-3-tridecafluorohexylpropane-1,3-dione; C6F13.CO.CH2.CO.C4H3S

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	alc/w	22°C	80%	U			K1=5.68 B2=11.19 K3=4.44	1995MTa (84455)	517

Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

C13H9FO2S HL CAS 43191-66-8 (6154)
1-(2'-Thienyl)-3"-fluoro-2"-hydroxyphenyl)-prop-1-one-2-ene;
C4H3S.CH:CH.CO.C6H3(OH)F

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaClO4	30°C	0.10M	U			K1=4.77	1989SHa (84515)	518

C13H9N3OS HL TAN CAS 1147-56-4 (4030)
1-(1',3'-Thiazol-2'-ylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	dis	oth/un	20°C	0.05M	U			K1=12.76 B2=24.36 B3=34.80 B4=44.08	1966NAa (84616)	519

C13H9N3OS L (6217)
Acenaphthenequinone Monothiosemicarbazone; C12H6O:N.NH.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	diox/w	25°C	75%	U	TI	K1=9.36 B2=18.16	1986SSd (84621)	520
Medium: 0.1 M NaCl 0.4. 30 C: K1=9.48, K2=8.93; 40 C: K1=9.27, K2=8.71; 50 C: K1=8.91, K2=8.27; I=0.01 M: K1=10.18, K2=9.86; I=0.05: K1=9.74, K2=9.29									

C13H11NOS H2L (7306)									
2-(Salicylideneamino)thiophenol, Salicylaldehyde-2-mercaptoanil;									
HO.C6H4.CH:N.C6H4.SH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	alc/w	25°C	70%	U		K1=13.39 B2=25.27	1995IFa (85044)	521
Medium: 70% v/v EtOH/H2O, 0.10 M NaCl.									

C13H11NO2 HL CAS 304-88-1 (181)									
N-Phenylbenzohydroxamic acid; C6H5.CO.N(C6H5).OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	dis	KCl	RT	0.10M	C			1996KNa (85156)	522
Method: extraction into benzene from 0.10 M KCl (pH 7.0; borate buffer).									
K(Ho+3HL(org)=HoL3(org)+3H)=-14.04									

C13H11NS HL CAS 42152-36-3 (8401)									
2-[(Phenylmethylene)amino]benzenethiol;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	alc/w	25°C	70%	U		K1=8.38 B2=16.44	1995IFa (85229)	523
Medium: 70% v/v EtOH/H2O, 0.10 M NaCl. Also data for p-Cl, p-NMe2, p-OH, p-OCH3, p-CH3, p-NO2 substituted benzaldehyde Schiff bases.									

C13H11N2O3F3 HL (5563)									
3-(2-Acetylphenylhydrazone)-1,1,1-trifluoropentane-2,4-dione;									
CF3.CO.C(CO.CH3):N.HN.C6H4.COCH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	diox/w	30°C	75%	U		K1=8.83 B2=16.43	1988ESb (85247)	524

C13H12N2O HL CAS 59129-92-9 (9080)									
N-2-(5-Methylpyridyl)salicylalimine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ho+++	gl	alc/w	25°C	50%	C	T H	K1=7.82 B2=13.24	1997GSa (85341)	525
K3=4.81									
Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=7.24, K2=5.00, K3=4.44. DH(K1)=-43 kJ mol-1.									

 C13H12N2O3S HL (6203)
 Salicylidenesulfanilamide, 4-(N-(2-Hydroxybenzylene))aminosulanilamide;
 H2NSO2C6H4N:CHC6H4OH

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

 Ho+++ gl oth/un 25°C 0.10M U K1=12.302 1987KSc (85360) 526

C13H12N4O L Diphenylcarbaz. CAS 538-62-5 (1195)
 Diphenylcarbazone; C6H5.NH.NH.CO.N:N.C6H5

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

 Ho+++ EMF alc/w 20°C 50% U K1=3.70 1971MAc (85413) 527
 Medium: 50% EtOH, 0.1 M NaClO4

 C13H12N4S L Dithizone CAS 60-10-6 (1801)
 Diphenylthiocarbazone; C6H5.NH.NH.CS.N:N.C6H5

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

 Ho+++ EMF alc/w 20°C 50% U K1=2.15 1971MAc (85463) 528
 Medium: 50% EtOH, 0.1 M NaClO4

 C13H14N2O3 HL (4940)
 3-(2-Acetylphenylhydrazone)pentane-2,4-dione;(CH3.CO)2C:N.NH.C6H4(CO.CH3)

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

 Ho+++ gl diox/w 30°C 75% U K1=10.98 B2=20.84 1988ESb (85610) 529

C13H15N06 H3L (4999)
 2-Benzylnitriilotriethanoic acid;

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

 Ho+++ oth oth/un 25°C 0.10M U K2=9.03 1962HKa (85738) 530

C13H19N03 H2L (2031)
 2-(1-(2-Hydroxyphenyl)-ethylimine)-3-methylbutanoic acid;

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

 Ho+++ gl NaClO4 25°C 0.10M U TIH K1=12.75 B2=23.30 1980SSc (86055) 531

C13H20N2O8 H4L CAS 123064-92-6 (7929)
 trans-1,3-Cyclopentanediaminotetraethanoic acid;

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

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-----
Ho+++      gl  KCl      25°C  1.0M U      K1=13.70      1989CMb (86121) 532
                                     K(HoHL+H)=3.18
                                     K(HoL+H)=4.14

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C13H22N2O8      H4L      CAS 1798-14-7 (921)
(Pentamethylenedinitrilo)tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2CH2

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

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Ho+++      gl  KNO3      25°C  0.10M C      K1=10.83      1982PPd (86197) 533
                                     K(Ho+HL)=7.06

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C13H22N2O8      H4L      CAS 1198-14-7 (5004)
1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)2NCH2CH(C3H7)N(CH2COOH)2

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

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Ho+++      vlt KNO3      20°C  0.10M U      K1=19.77      1974NLa (86228) 534

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C13H22N2O8      H4L      (7164)
2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid;
(HOOCCH2)2NCH(CH3)CH2CH(CH3)N(CH2COOH)2

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

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```

Ho+++      vlt KNO3      20°C  0.10M U      K1=13.20      1981NSc (86256) 535

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C13H22N2O8      H4L      (5003)
3-Methyl-1,2-diaminobutane-N,N,N',N'-tetraethanoic acid;

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

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```

Ho+++      vlt KNO3      20°C  0.10M U      K1=19.70      1968NLb (86283) 536

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```

*****

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```

C13H22N2O9      H4L      DETAP      CAS 36829-96-6 (5602)
Bis(2-aminoethyl)ether-N,N,N'-triethanoic acid-N'-(3-propanoic acid);

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

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```

Ho+++      gl  KNO3      25°C  0.10M C      K1=15.01      1985PLa (86304) 537
                                     K(Ho+HL)=9.06

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C14H8O4      H2L      Alizarin      CAS 72-48-0 (1058)
1,2-Dihydroxyanthraquinone;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ho+++      gl  oth/un 25°C  0.10M U      K1=12.42      1981EIa (86643) 538

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C14H8O7S H3L DASA CAS 83-61-4 (950)
1,2-Dihydroxyanthraquinone-3-sulfonic acid, Alizarin Red S;

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

Ho+++ sp mixed ? 50% U 1973KTb (86736) 539

K1eff=6.90
B3eff=17.40

Medium: 50% v/v acetone. Borax buffers.

C14H9N5Cl2 L CAS 7071-45-6 (8463)
1,5-Bis(4-chlorophenyl)-3-cyanoformazan;

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

Ho+++ gl diox/w 25°C 70% U K1=7.96 B2=14.28 1996DAb (86850) 540

Medium: 70% dioxane/H2O, 0.10 M NaClO4.

C14H10N2F HL CAS 87221-43-0 (6155)
1-(2'-Pyridyl)-3-(3-fluoro-2-hydroxyphenyl)-prop-1-one-2-ene;
C5H4N.CH:CH.CO.C6H3(OH)F

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

Ho+++ gl NaClO4 30°C 0.10M U K1=5.21 1989SHa (86885) 541

C14H11N5 L CAS 7014-08-6 (8461)
1,5-Diphenyl-3-cyanoformazan;

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

Ho+++ gl diox/w 25°C 70% U K1=7.32 B2=14.39 1996DAb (87000) 542

Medium: 70% dioxane/H2O, 0.10 M NaClO4.

C14H12N2O3 H2L CAS 4870-46-6 (3432)
2-Hydroxy-5-methyl-2'-carboxy-azobenzene; HO.C6H3(CH3).N:N.C6H4.COOH

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

Ho+++ gl diox/w 25°C 50% U I K1=3.91 B2=8.04 1985ANa (87216) 543

C14H13N2O4S H2L (3660)
2-Aminobenzenesulfonic acid 2-hydroxyacetophenone Schiff base;
HSO3.C6H4.N:C(CH3).C6H4.OH

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

Ho+++ gl NaClO4 25°C 0.10M U T H K1=7.12 B2=12.27 1978GKb (87576) 544

Data for 25-35 C and I=0.01-0.10 M. At I=0.0 M, DH(K1)=29.9 kJ mol⁻¹,
DS(K1)=335 J K⁻¹ mol⁻¹.

C14H15N2O3Cl H2L (8285)
5,5'-Dimethylcyclohexane-2-(2'-hydroxy-4'-chlorophenyl)hydrazono-1,3-dione;

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

Ho+++ gl mixed 30°C 0.10M U T H K1=12.28 B2=22.56 1988TRb (87720) 545
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water

C14H15O4P HL CAS 843-24-3 (2134)
Di(4-methylphenyl)phosphoric acid; (CH3C6H5)2P(O)OH

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

Ho+++ kin oth/un 25°C 0.02M U K1=3.57 1974GMc (87793) 546

C14H16N2O2S HL CAS 189231-67-2 (8475)
2-Thiophenylhydrazodimedone;

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

Ho+++ gl diox/w 25°C 75% C T H K1=13.56 B2=25.50 1997Eia (87869) 547
Medium: 75% v/v dioxane/H2O, 0.10 M KNO3. Data for 10-40 C. DH(K1)=-8.15
kJ mol⁻¹, DS(K1)=-12.62 J K⁻¹ mol⁻¹; DH(K2)=-7.16, DS(K2)=-11.08.

C14H16N2O3 H2L (8284)
5,5'-Dimethylcyclohexane-2-(2'-hydroxyphenyl)hydrazono-1,3-dione;

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

Ho+++ gl mixed 30°C 0.10M U T H K1=12.46 B2=22.98 1988TRb (87887) 548
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water

C14H16N2O8 H4L CAS 40774-59-2 (1901)
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2

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

Ho+++ gl NaClO4 25°C 1.00M C H K1=15.18 1992YNa (87954) 549
By calorimetry: DH(K1)=9.6 kJ mol⁻¹, DS=323 J K⁻¹ mol⁻¹

C14H22N2O8 H4L cis-1,3-CDTA CAS 92681-23-7 (2847)
cis-1,3-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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

Ho+++ gl KCl 25°C 1.0M U K1=8.21 1987CMe (88443) 550
K(HoHL+H)=5.00
K(HoL+H)=7.09

C14H22N2O8 H4L cis-1,4-CDTA CAS 92681-25-9 (2848)
cis-1,4-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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

Ho+++ gl KCl 25°C 1.0M U K1=9.13 1987CMe (88457) 551
K(HoHL+H)=5.61
K(HoL+H)=5.94

C14H22N2O8 H4L CDTA CAS 482-54-2 (200)
trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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

Ho+++ gl KCl 25°C 1.0M U K1=20.29 1987CMe (88686) 552
K(HoL+H)=1.30

Ho+++ gl KCl 25°C 1.00M U K1=20.29 1984MFa (88687) 553

Ho+++ gl NaClO4 30°C 0.10M U I M 1982MMd (88688) 554
K(HoL+A)=6.70
K(HoL+B)=4.15
K(HoL+C)=3.75

Data for 0.00-0.25 M NaClO4 and 25-75% dioxane/H2O. H3A is alizarin red S,
H2B is 8-hydroxyquinoline-5-sulfonic acid, H2C is iminodiethanoic acid.

Ho+++ EMF KNO3 25°C 0.10M U T H K1=19.89 1962MHa (88689) 555
DH(K1)=5.0 kJ mol⁻¹, DS=397 J K⁻¹ mol⁻¹. At 20 C: K(HoL+H)=2.41

C14H22N2O8 H4L trans-1,3-CDTA CAS 92681-24-8 (2849)
trans-1,3-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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

Ho+++ gl KCl 25°C 1.0M U K1=8.52 1987CMe (88837) 556
K(HoHL+H)=4.61
K(HoL+H)=7.16

C14H22N2O8 H4L trans-1,4-CDTA CAS 92681-26-0 (2843)
trans-1,4-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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

Ho+++ gl KCl 25°C 1.0M U K1=9.27 1987CMe (88857) 557
K(HoHL+H)=5.66
K(HoL+H)=6.03

Ho+++ gl KCl 25°C 1.00M U K1=9.27 1984MFb (88858) 558

C14H22N2O9 H2L CAS 93031-53-9 (5830)

1,4,7-Trioxa-10,13-diazacyclopentadecane-8,15-dione-10,13-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++ gl R4N.X 25°C 0.10M C K1=8.48 1988CCb (88881) 559

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
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Ho+++ cal KNO3 25°C 0.10M C T 1988MIa (89283) 560
DH(K1)=-29.42 kJ mol-1, DS=337.7 J mol-1 K-1. Also data for 283 and 313 K

Ho+++ cal NaClO4 25°C 0.10M C H 1987YJa (89284) 561
DH(K1)=-25.1 kJ mol-1, DS(K1)=352 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++ cal NaClO4 25°C 0.50M U H 1977CGc (89285) 562
DH(K1)=-42.6 kJ mol-1

Ho+++ cal KNO3 27°C 0.10M U H 1968CLd (89286) 563
DH(K1)=-31.4 kJ mol-1, DS=330 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++ EMF KNO3 25°C 0.10M U H K1=22.78 1962MTc (89287) 564
DH(K1)=-31.8 kJ mol-1, DS=329 J K-1 mol-1

C14H24N2O8 H4L (5075)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-butyric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++ vlt KNO3 20°C 0.10M U K1=17.85 1969NDc (89511) 565

C14H24N2O8 H4L (7165)
1,2-Diaminohexane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)NCH2CH(C4H9)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++ vlt KNO3 20°C 0.10M U K1=19.72 1974NLa (89531) 566

C14H24N2O8 H4L HMDTA CAS 1633-00-7 (920)
1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2.CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ho+++ gl KCl 25°C 1.00M U M 1976BKa (89582) 567
K(HoEDTA+L)=3.0
K(HoEDTA+HL)=2.9
K(2HoEDTA+L)=6.0

Ho+++ gl KCl 25°C 0.10M U 1974Kpd (89583) 568

K(Ho+HL)=6.96

C14H24N2O8 H4L CAS 1633-00-7 (5076)

4-Methyl-1,2-diaminopentane-N,N,N',N'-tetraethanoic acid;
(HOOCCH2)2NCH2CH(N(CH2COOH)2CH2CH(CH3)2

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

Ho+++ vlt KNO3 20°C 0.10M U K1=19.71 1968NLb (89634) 569

C14H24N2O8 H2L CAS 17619-53-3 (5833)

Diaminoethane-N,N'-Di(ethylaceto)-N,N'-diethanoic acid;
(-CH2.N(CH2.COOH)CH2.COOC2H5)2

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

Ho+++ gl R4N.X 25°C 0.10M C K1=10.49 1988CCb (89652) 570

C14H24N2O8 H4L EDTP (2936)

Diaminoethane-N,N,N',N'-tetrapropanoic acid; (HOOC.CH2CH2)2N.CH2CH2.N(CH2CH2.COOH)2

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

Ho+++ gl NaClO4 25°C 0.10M U 1995HAa (89684) 571

K(Ho+HL)=4.61

K(Ho+H2L)=3.69

K(Ho+H3L)=2.70

B(HoHL)=14.04

B(HoH2L)=19.24, B(HoH3L)=22.42

C14H24N2O9 H4L BPETA CAS 87720-52-3 (5077)

Bis-(3-di(carboxymethyl)aminopropyl)ether;

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

Ho+++ gl KNO3 25°C 0.10M U K1=11.75 1984TPa (89731) 572

K(Ho+HL)=7.80

C14H24N2O10 EGTA CAS 67-42-5 (349)

Ethyleneglycol-O,O'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L

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

Ho+++ gl alc/w 25°C 20% M TI K1=17.065 2000KDa (89878) 573

Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Data for 0.05 and 0.15 M NaNO3.

At I=0, K1=17.254. Data for 35 and 45 C and I=0.10 M NaNO3.

Ho+++ gl KCl 25°C 1.0M U M K2=1.49 1985KBb (89879) 574

K(HoL+ida)=1.3

Ho+++ EMF KNO3 20°C 0.10M U K1=17.38 1962MMc (89880) 575

C14H25N3O8 H4L DEATA CAS 97315-55-4 (5601)

N,N-Bis(2-aminoethyl)ethylamine-N',N',N'',N''-tetraethanoic acid;

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

Ho+++ gl KNO3 25°C 0.10M C K1=17.72 1985TPa (90101) 576

C14H26N2O7 H2L (1567)

1,4,10-Trioxa-7,13-diazacyclopentadecane-N,N'-diethanoic acid;

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

Ho+++ gl R4N.X 25°C 0.10M M K1=11.34 1986COB (90192) 577

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

Ho+++ sp non-aq 25°C 100% U K1=3.80 1983PSc (90371) 578
Medium: DMSO

Ho+++ gl R4N.X 25°C 0.25M C K1=6.21 1981BBE (90372) 579
Medium: Me4NCl

C14H28N2O6 HL CAS 82353-42-2 (5850)

1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7-ethanoic acid;

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

Ho+++ gl R4N.X 25°C 0.10M C K1=6.91 1988CCc (90481) 580

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

Ho+++ gl non-aq 25°C 100% C K1=6.51 1989BPa (90522) 581
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

C14H30O7 L CAS 1072-40-8 (2499)

2,5,8,11,14,17,20-Heptaoxaheneicosane; CH3.0.(CH2.CH2.0)6.CH3

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

Ho+++ gl non-aq 25°C 100% C K1=5.62 1989BPa (90693) 582
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

 C14H32N2O10P2 H4L CAS 81963-60-2 (7240)
 1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diylldimethylenediphosphonic acid;

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

 Ho+++ gl R4N.X 25°C 0.10M U K1=13.12 1996BJa (90765) 583
 K(Ho+HL)=10.33
 K(Ho+H2L)=5.89

Medium: 0.1 M Me4NCl

C15H11N3O HL PAN CAS 85-85-8 (572)
 1-(2-Pyridylazo)-2-naphthol; C5H4N.N:N.C10H6.OH

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

 Ho+++ gl alc/w 21°C 50% C I K1=9.66 1986CMb (91221) 584
 Other constants in 75%, 50% and 75% n-C3H7OH/H2O and i-C3H7OH/H2O

 Ho+++ sp alc/w 21°C 50% U I K1=9.56 1981MCb (91222) 585
 Medium: 50% MeOH, 0.1 M NaClO4. In 75% MeOH K1=11.51

 Ho+++ dis oth/un 20°C 0.05M U K1=12.76 B2=24.36 1966NAa (91223) 586
 B3=34.80
 B4=44.08

C15H11N3O2 L CAS 74378-23-7 (2745)
 Phenanthrenequinone monosemicarbazone; C14H8(:O)(:N.NH.CO.NH2)

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

 Ho+++ gl diox/w 25°C 75% C TIH K1=7.29 B2=13.80 1989SVa (91305) 587
 DH(K1)=-68.55 kJ mol⁻¹

C15H12OS HL (1261)
 mono-Thiodibenzoylmethane; C6H5.CO.CH2.CS.C6H5

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

 Ho+++ gl NaClO4 30°C 0.05M U K1=9.26 B2=18.10 1979VMa (91493) 588
 K3=7.74

C15H18N2O3 HL CAS 116822-13-0 (6743)
 5,5-Dimethylcyclohexane-2-(2-hydroxy-4'-methylphenyl)-hydrazono-1,3-dione;

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

 Ho+++ gl alc/w 20°C 75% U T H K1=11.65 B2=19.74 1993RAa (92025) 589
 Medium: 75% v/v MeOH/H2O; 0.10 M KNO3

Ho+++ gl mixed 30°C 0.10M U T H K1=12.70 B2=23.62 1988TRb (92026) 590
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water

C15H20N2O6 H3L BEDTA CAS 65311-06-0 (2944)
N-Benzylidiaminoethane-N,N',N'-triethanoic acid;

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

Ho+++ gl KNO3 25°C 0.10M C K1=13.26 1978MPb (92152) 591

C15H23N3O2 L CAS 36763-33-4 (5176)
N,N,N',N'-Tetraethyl-2,6-pyridinedicarboxamide;

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

Ho+++ sp non-aq 25°C 100% M K1=7.3 B2=14.80 1997RPb (92284) 592
B3=22.3

Medium: acetonitrile.

C15H25N3O10 H5L (5127)
Diethylenetriamine-N,N,N'',N''-tetraethanoic acid-N'-propanoic acid;

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

Ho+++ EMF KCl ? 0.10M U K1=16.71 1966VLa (92373) 593

C15H25N3O10 H5L (6100)
Diethylenetriamine-N,N,N'',N''-tetraethanoic acid-N''-propanoic acid;

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

Ho+++ gl KNO3 25°C 0.10M C K1=19.45 1989SPa (92394) 594
K(Ho+HL)=13.41

C15H26N4O9 H4L (7685)
Diethylenetriamine-N,N,N',N'',N''-pentaethanoic acid N'-methylamide;

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

Ho+++ gl KCl 25°C 0.10M C K1=20.8 2000SBb (92432) 595

C15H26N4O9 H4L CAS 137076-43-8 (5085)
Diethylenetriamine-N,N,N',N'',N''-pentaethanoic acid N-methylamide;

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

Ho+++ gl KCl 25°C 0.10M C K1=19.5 2000SBb (92447) 596

C16H9N2OBr3 HL CAS 84317-74-8 (5169)
1-(2,4,6-Tribromophenylazo)-2-hydroxynaphthalene;

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

Ho+++ kin oth/un 25°C 0.02M U K1=5.28 1972GSe (92655) 597

C16H11N5O4 H2L (5153)
1,5-Bis(2-carboxyphenyl)-3-cyanoformazan;

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

Ho+++ gl diox/w 25°C 70% U I K1=11.90 B2=20.89 1996DAb (92896) 598
Medium: 70% dioxane/H2O, 0.10 M NaClO4. In 50% EtOH/H2O, 0.10 M NaClO4,
K1=11.18, K2=9.54.

C16H12N2O HL CAS 5603-14-5 (9083)
2-[(Quinolylmethylene)amino]phenol;

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

Ho+++ gl alc/w 25°C 50% C K1=6.81 B2=12.39 1997GSa (92926) 599
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.

C16H12N2O11S3 H5L CAS 548-81-2 (5180)
2-(4'-Sulfophenylazo)chromotropic acid,
2-(4-sulfophenylazo)-1,8-dihydroxyaphthalene-3,6-diHSO3

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

Ho+++ gl oth/un 25°C 0.10M U K1=7.81 B2=12.52 1985AAa (93095) 600
Data also for 12 other 4-substituted phenyl analogues

C16H12N2S L CAS 31230-95-2 (9085)
2(2-Benzothiazoliny)quinoline;

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

Ho+++ gl alc/w 25°C 50% C K1=6.51 B2=11.87 1997GSa (93105) 601
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.

C16H12N3O4ClS H2L CAS 133131-00-7 (8468)
7-Amino-8-[(4-chlorophenyl)azo]-4-hydroxy-2-naphthalenesulfonic acid;

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

Ho+++ gl NaCl 25°C 0.10M U K1=9.00 B2=16.83 1997IHa (93115) 602
B3=22.99
Also data for the 4'-bromo-, 4'-fluoro-, 4'-nitro-, 4'-methoxy-, 4'-di-
methylamino-, 4'-hydroxy-, 4'-carboxy-, 4'-AsO(OH)2-, 2'-hydroxy- analogue

C16H12N5O3 L CAS 77251-11-7 (5928)

1-Phenyl-3-methyl-4(2'-nitrophenylhydrazo)-5-pyrazolone;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  diox/w 30°C 75% M          K1=7.45      1987ESa (93130) 603
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C16H13N2O10AsS2      H5L  Thorin I          CAS 3688-92-4 (2609)
1-((2-Arsonophenyl)azo)-2-hydroxy-3,6-naphthalylidysulfonic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  NaClO4 30°C 0.10M U          1976NDa (93195) 604
                                K(Ho+H2L=HoH2L)=5.90
                                K(HoHL+H)=6.90
                                K(HoL+H)=9.02
                                K(HoL+OH)=3.00
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C16H13N2O11AsS2      H6L  Arsenazo I          CAS 520-10-5 (277)
2-(2'-Arsonophenylazo)chromotropic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      sp  oth/un 20°C 0.10M U          1971SSd (93257) 605
                                K(Ho+H2L)=8.27
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```
C16H14N2O5           H2L          (7017)
4-Hydroxy-1-carboxy-7-dimethylaminophenoxaz-3-one methyl ester;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      sp  alc/w 25°C 10% U I          1979KRb (93440) 606
                                B3=19.43
Medium: 10% w/w EtOH/H2O, 0.1 M NaClO4. In 30%: B3=20.02
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```
C16H14O4             HL  BHMMA          (5929)
omega-Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  alc/w 30°C 25% M          K1=7.38  B2=14.05  1987DGB (93581) 607
Medium: 25% v/v EtOH/H2O
*****
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C16H15NO7           H4L          (4082)
N-(3-Carboxy-2-hydroxynaphthyl-1-ylmethyl)iminodiethanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++      gl  KCl 25°C 0.10M U          K1=16.1      1975TRb (93632) 608
                                K(Ho+HL)=9.4
*****
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C16H15N5 L CAS 7014-14-4 (8462)
1,5-Bis(4-methylphenyl)-3-cyanoformazan;

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

Ho+++ gl diox/w 25°C 70% U K1=8.40 B2=16.16 1996DAb (93640) 609
Medium: 70% dioxane/H2O, 0.10 M NaClO4.

C16H18N2O3 HL (5564)
2-(2-Acetylphenylhydrazone)-5,5-dimethyl-1,3-cyclohexanedione;

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

Ho+++ gl diox/w 30°C 75% U K1=9.74 B2=18.23 1988ESb (93779) 610

C16H18N4 L CAS 172665-46-2 (7699)
N,N'-Dimethyl-1,10-phenanthroline-2,9-dimethanamine;

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

Ho+++ gl NaClO4 25°C 0.10M U K1=7.99 B(HoHL)=15.02 2001WZa (93843) 611

Also data for the N,N'-diethyl, isopropyl, butyl and isobutyl derivatives.

C16H20N2O8 H4L CAS 6411-02-5 (1919)
1-Phenyl-ethylenediamine-N,N,N',N'-tetraethanoic acid (DL)

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

Ho+++ vlt KNO3 20°C 0.10M U K1=18.69 1969NDb (94040) 612

C16H26N2O10 H2L CAS 93031-54-0 (5831)
1,4,7,10-Tetraoxa-13,16-diazacyclooctadecane-11,18-dione-13,16-diethanoic acid;

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

Ho+++ gl R4N.X 25°C 0.10M C K1=9.44 1988CCb (94570) 613

C16H27N5O8 H3L (6621)
1,4,7-Tris(carboxymethyl)-1,4,7,10,13-pentaazacyclopentadecan-9,14-dione;

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

Ho+++ sp KCl 25°C 0.08M U K1=11.3 1994FCa (94670) 614

C16H27N5O8 H3L (6915)
4,10,13-Tris(carboxymethyl)-1,4,7,10,13-pentaazacyclopentadeca-8,15-dione;

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

Ho+++ sp KCl 25°C 0.08M U K1=15.1 1994FCa (94685) 615

C16H28N2O8 H4L (5167)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-(3-methyl)butanoic acid;

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

Ho+++ gl KNO3 20°C 0.10M U K1=14.70 1969NDc (94713) 616
By polarography: K1=14.71

C16H28N2O8 H4L (5168)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-pentanoic acid;

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

Ho+++ vlt KNO3 20°C 0.10M U K1=17.85 1969NDc (94739) 617

C16H28N2O8 H4L (5138)
1,2-Diaminooctane-N,N,N',N'-tetraethanoic acid;
(HOOCCH2)2N.CH2.CH(C6H13)N(CH2COOH)2

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

Ho+++ vlt KNO3 20°C 0.10M U K1=19.67 1979MBd (94765) 618

C16H28N4O8 H4L DOTA CAS 60239-18-1 (1017)
1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraethanoic acid;

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

Ho+++ gl NaCl 37°C 1.0M C K1=23.5 1994TBb (94905) 619
Method: Competitive reaction with Eu3+ ion.

C16H30N2O8 H2L CAS 72912-01-7 (1568)
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-N,N'-diethanoic acid;

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

Ho+++ gl R4N.X 25°C 0.10M U K1=11.18 1983CRb (95042) 620

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

Ho+++ sp non-aq 25°C 100% U K1=3.11 1983PSc (95210) 621
Medium: DMSO

C17H13N4O3 HL (5927)
1-Phenyl-3-methyl-4-(2'-carboxyphenylhydrazo)-5-pyrazolone;


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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  diox/w 30°C 75% M      K1=16.01 B2=28.41 1987ESa (95767) 622
*****
C17H14N2O2          L          CAS 4551-69-3 (698)
4-Benzoyl-3-methyl-1-phenyl-2-pyrazolin-5-one;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  NaNO3 20°C 0.10M U    M          1981GCa (95885) 623
          B(Ho+3L+2TBP)=24.18
          B(Ho+3L+TBPOxide)=23.6
          B(Ho+3L+4TBPOxide)=34.0
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*****
C17H15N4O2          L          CAS 97671-53-9 (5926)
1-Phenyl-3-methyl-4-(2'-methoxyphenylhydrazo)-5-pyrazolone;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  diox/w 30°C 75% M      K1=8.43 B2=16.44 1987ESa (96008) 624
*****
C17H16N2O3S2        L          CAS 127335-83-5 (6849)
Sulfafurazole thiophene-2-aldehyde Schiff base; C4H3S.CH:N.C6H4.SO2.NH.C4HO(CH3)2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  oth/un 25°C 0.10M U T    K1=5.41          1990TSa (96039) 625
30 C: K=5.26, 35 C: K=5.10
*****
C17H16O4            H2L          CAS 58134-82-0 (6193)
Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;
C6H5.CO.CH2.CO.C6H2(OH)(OCH3)(CH3)
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  alc/w 30°C 75% U    M    B2=14.44          1991GDd (96150) 626
Medium: 75% v/v EtOH/H2O, 0.1 M NaClO4. K(Ho(Acetylacetone)+L)=12.74
-----

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-----
Ho+++     gl  alc/w 30°C 75% U T H    K1=8.53 B2=15.15 1987DGd (96151) 627
Medium: EtOH.20 C:K1=8.21,K2=7.12; 40 C:K1=8.80,K2=8.04;50 C:K1=8.90,K2=8.48
DH(K1)=-34.3 kJ mol-1, DS=50 J K-1 mol-1
*****
C17H20N3O3F          HL          (7845)
1-Ethyl-6-fluoro-7-(4-methylpyperazine-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid;
-----

```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  alc/w 22°C 0.1M U      K1=5.62 B2=10.10 2000TBb (96286) 628
-----

```

Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O

C17H23N4O4BrS H2L (1594)
2-(5-Bromo-2-pyridylazo)-5-(N-propyl-3-sulfopropylamino)phenol;

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

Ho+++ sp NaNO3 25°C 0.10M C K1=8.46 19880Ha (96420) 629
K(Ho+HL)=2.79

C17H27N04 L CAS 71089-11-7 (7945)
13-Phenylmethyl-1,4,7,10-tetraoxa-13-azacyclopentadecane;

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

Ho+++ cal non-aq 25°C 100% C H K(HoNO3+L)=3.13 1993LLb (96534) 630

Medium: acetonitrile. DH(HoNO3+L)=-89.99 kJ mol⁻¹.

C17H29N3O10 H4L CAS 89378-46-1 (5528)
(Bis(3-(bis(carboxymethyl)amino)propyl)methylammonio)ethanoate;

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

Ho+++ gl KNO3 25°C 0.10M U K1=9.35 1984TPa (96572) 631
K(Ho+HL)=6.12

C18H16N2O3 HL (5560)
2-(2-Acetylphenylhydrazone)-1-phenyl-but-1,3-dione;
C6H5.CO.C(CO.CH3):N.NH.C6H4.COCH3

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

Ho+++ gl diox/w 30°C 75% U K1=10.58 B2=19.83 1988ESb (97172) 632

C18H18N4 L CAS 16858-01-8 (1528)
Tris(2-pyridylmethyl)amine; (C5H4NCH2)3N

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

Ho+++ nmr KCl 25°C 1.0M C K1=1.79 2004BRa (97262) 633
Method: 1H nmr measurements in D2O.

C18H20N2O6 H4L EHPG CAS 10328-28-6 (429)
N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (HOOCCH(C6H4OH)NHCH2.)2

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

Ho+++ EMF KNO3 25°C 0.10M C T H K1=20.66 1985HWb (97431) 634
K(HoL+H)=6.96

Method: Hg (and glass) electrode, using Hg(II) as competitive indicator ion. Data for 10-35 C. DH(K1)=-73.3 kJ mol⁻¹, DS(K1)=150 J K⁻¹ mol⁻¹.

C18H22N4O4 H2L CAS 2444-14-6 (3502)

N,N'-Bis(2-pyridylmethyl)diaminoethane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaCl	25°C	0.16M	C			K1=12.31 K(Ho+L=HoL(OH)+H)=3.00 K(HoL(OH)+H)=9.31	1997CMa (97544)	635

C18H25N3O8 H4L BEATA CAS 87732-99-8 (5600)

N,N-Bis(2-aminoethyl)aniline-N',N',N'',N'''-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	KNO3	25°C	0.10M	C			K1=15.02	1985TPa (97654)	636

C18H28O5 L CAS 15196-73-3 (2359)

2,3-(4'-Dimethylethylbenzo)-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	non-aq	25°C	100%	U			K1=2.80	1982MDa (97806)	637

Medium: propylene carbonate

C18H30N2O11 H2L CAS 93049-99-1 (5832)

1,4,7,10,13-Pentaoxa-16,19-diazacycloeicosane-14,21-dione-16,19-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	R4N.X	25°C	0.10M	C			K1=9.13	1988CCb (97910)	638

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)

Triethylenetetraaminehexaethanoic acid;((HOOC.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	EMF	KNO3	25°C	0.10M	C T H			K1=23.20 K(HoL+H)=4.08 K(HoHL+H)=2.28	1987HCa (98051)	639

Method: Hg electrode; competitive reaction with Hg(II).

Data for 15-35 C. At 25 C, DH(K1)=96.2 kJ mol⁻¹, DS(K1)=766 J K⁻¹ mol⁻¹.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	vlt	R4N.X	30°C	0.01M	C			K1=19.76	1981GMh (98052)	640

Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	vlt	NaClO4	25°C	0.40M	C			K1=23.58	1978MNB (98053)	641

Medium: 0.40 M NaClO4, pH 4.80. Method: polarography, using Cd as

indicator ion.

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-----  
Ho+++      gl  KNO3   25°C 0.10M U      K1=15.4      1969YMa (98054) 642  
K(HoL+H)=4.67  
K(HoHL+H)=2.33  
B(Ho2L)=18.3  
*****  
C18H32N4O8      H4L   TETA      CAS 60239-22-7 (1019)  
1,4,8,11-Tetraazacyclotetradecane-1,4,8,11-tetraethanoic acid;  
-----  
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo  
-----  
Ho+++      gl  NaNO3  25°C 0.20M C      K1=14.95      1991KKa (98209) 643  
*****  
C18H34N2O8      H2L      CAS 68670-15-5 (5851)  
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-di-(3-propanoic acid);  
-----  
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo  
-----  
Ho+++      gl  R4N.X  25°C 0.10M C      K1=6.47      1988CCc (98338) 644  
*****  
C18H34N4O9      H3L   D03A-B      (7301)  
10-[2,3-Dihydroxy-(1-hydroxymethyl)-propyl]-1,4,7,10-tetraazacyclododecane-1,4,7-triethanoic ac.;  
-----  
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo  
-----  
Ho+++      gl  NaCl   25°C 0.10M C I      K1=18.9      1996TKa (98380) 645  
In 0.1 M Me4NCl K=21.0  
*****  
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  
-----  
Ho+++      cal non-aq 25°C 100% C H      K1=15.00      2003DCa (98584) 646  
Method: competitive titration calorimetry of AgL+. Medium: acetonitrile.  
DH(K1)=-99.2 kJ mol-1, DS(K1)=-46 J K-1 mol-1.  
-----  
Ho+++      gl  alc/w  25°C 100% C      K1=10.86      1983ANb (98585) 647  
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4  
-----  
Ho+++      sp  non-aq 25°C 100% U      K1=3.47      1983PSc (98586) 648  
Medium: DMSO  
-----  
Ho+++      gl  R4N.X  25°C 0.25M C      K1=6.2      1981BBE (98587) 649  
Medium: Me4NCl  
*****  
C18H40N2O10P2      H2L      (7241)  
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diyl dimethylenediphosphonic acid
```

bis(Et-ester);

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

Ho+++ gl R4N.X 25°C 0.10M U K1=6.82 1996BJa (98893) 650
Medium: 0.1 M Me4NCl

C19H16N4O L LAMI (5930)
2-(2'-Lepidylazo)-N-methylisatin

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

Ho+++ gl diox/w 30°C 75% M I K1=10.35 B2=19.74 1987DGc (99164) 651
Medium: 75% v/v dioxan/H2O, 0.15 M NaClO4

C20H14N2O5 H3L Solochrome 6B CAS 3564-14-5 (3507)
1-(1-Hydroxy-2-naphthylazo)-2-naphthol-4-sulfonic acid, Mordant Black3, Eriochrome
blue-black B;

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

Ho+++ gl NaClO4 30°C 0.10M U T H K1=13.96 1991NNb (99652) 652
Also data for 40 and 50 C. DH and DS values.

C20H14N2O5 H3L EriochrBluBlk R CAS 2538-85-4 (3508)
3-Hydroxy-4-(2-hydroxy-1-naphthylazo)naphthalene-1-sulfonic acid;

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

Ho+++ gl diox/w 30°C 50% U K1=12.13 1976NNa (99692) 653

C20H14N2O11S3 H5L Chromotrope 8B CAS 5850-64-6 (2674)
3-(4'-Sulfonaphthylazo)chromotropic acid;

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

Ho+++ sp NaClO4 25°C 0.10M C K1=6.26 1979PLb (99712) 654

C20H14N2O11S3 H2L Hydroxynaphthol CAS 63451-35-4 (2835)
Hydroxynaphthol blue, 1-(2-Hydroxy-4-sulfo-1-naphthylazo)-2-naphthol-3,

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

Ho+++ sp none 25°C 0.0 U K1eff=3.68 1978BRb (99731) 655

Keff at pH 10

C20H18N4O2 HL (5917)
Pyruvic monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

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

Ho+++ gl diox/w 30°C 75% U 1985RSb (99834) 656

K(Ho+HL)=5.26
K(Ho+2HL)=10.72

C20H24N2O6 H4L HBED CAS 3625-89-6 (2208)
N,N'-Di-(2-hydroxybenzyl)-diaminoethane-N,N'-diethanoic acid;

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

Ho+++ gl KNO3 20°C 0.10M U K1=19.97 1985SNb (100001) 657

K(HoL+H)=5.18
K(HoHL+H)=4.82

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

Ho+++ gl oth/un 25°C 0.0 U H K1=2.86 1991HJa (100124) 658

C20H35N5O10 H5L (6545)
1,4,7,10,13-Pentaazacyclopentadecane-N,N',N'',N''',N''''-pentaethanoic acid;

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

Ho+++ gl NaNO3 25°C 0.20M C K1=16.48 1991KKa (100539) 659

Ho+++ gl NaClO4 25°C 0.20M C K1=16.48 1990KMD (100540) 660

C20H35N5O10 H3L (6623)
1,4,7-Tris(carboxymethyl)-13,16-dioxo-1,4,7,10,19-pentaazacycloheneicoso-9,20-dione
;

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

Ho+++ sp KCl 25°C 0.08M U K1=17.3 1994FCa (100558) 661

C20H43O4P HL CAS 7785-87-1 (2132)
Didecylphosphoric acid; (C10H21O)2P(O)OH

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

Ho+++ kin oth/un 25°C 0.02M U K1=4.41 1974GMc (100907) 662

C21H17N2O5As H2L ArsenoBDMPH (5931)
2-Arsonodibenzoylmethanephenylhydrazone; C6H5.CO.C(CO.C6H5):N.NH.C6H4.AsO3H2

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

Ho+++ gl alc/w 27°C 40% U K1=16.30 B2=20.90 1990M0c (101079) 663
Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4

C21H17N5 L (7365)
2,6-Bis(1-methylbenzimidazol-2-yl)pyridine

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

Ho+++ sp non-aq 20°C 100% U K1=8.9 B2=16.20 1997PBa (101088) 664
K3=6.1

Medium: CH3CN

C22H14O9 H5L CAS 4431-00-9 (3513)
Aurintricarboxylic acid;

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

Ho+++ sp oth/un 25°C ? U 1967SAa (101501) 665
K(Ho+HL)=5.0(?)

C22H17AsN4O14S3 H6L Arsenazo M CAS 3563-69-7 (623)
2-(2-Arsonophenylazo)-7-(3-sulfophenylazo)-1,8-dihydroxynaphthalene-3,6-disulfonic
acid;

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

Ho+++ sp oth/un ? ? U K1=15.63 1971SSi (101545) 666

C22H18N4O14As2S2 H8L Arsenazo III CAS 1668-00-4 (1148)
2,7-Bis(2'-arsonophenylazo)chromotropic acid;

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

Ho+++ sp oth/un rt 0.10M C 2004LLa (101628) 667

K1eff=5.35
B2eff=9.78
B(2,2)eff=15.40
Method: spectral deconvolution. Medium: 0.1 M chloroacetate buffer, pH 3.5

Ho+++ sp oth/un 20°C ? U 1972SSi (101629) 668
K(Ho+H4L)=16.57

C22H24N2O10 H4L CAS 132796-79-3 (8113)
1,2-Bis(2-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;

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

Ho+++ EMF KNO3 25°C 0.10M C T H K1=11.25 1990HLA (101898) 669
K(HoL+H)=3.23

Method: Competitive reaction with Hg++, using Hg indicator electrode.

Data for 15-35 C. DH(K1)=-40.0 kJ mol-1, DS(K1)=81.3 J K-1 mol-1.

```
*****
C22H26N4O10          H4L      BAPTA          (7230)
1,2-Bis(o-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;
((HOOCCH2)2NCH(OC6H4NH2)2
-----
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	R4N.X	25°C	0.10M	C			K1=10.49	1993YTa (101978)	670

```
*****
C22H30N4            L           CAS 250790-21-7 (7943)
N,N'-Bis(1,1-dimethylethyl)-1,10-phenanthroline-2,9-dimethanamine;
-----
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	NaCl04	25°C	0.10M	U			K1=8.72 B(HoHL)=15.62	2001WZa (102114)	671

Also data for the N,N'-diethyl, isopropyl, butyl and isobutyl derivatives.

```
*****
C22H37N5O14          H7L           CAS 3234-59-1 (2425)
Tetraethylenepentamineheptaethanoic acid;
-----
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	vlt	R4N.X	30°C	0.01M	C			K1=20.35	1981GMh (102330)	672

Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.

Ho+++	gl	KNO3	25°C	0.10M	U			K1=20.35 K(Ho+HL)=13.97 B(HoH-1L)=5.21	1968MIc (102331)	673
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```
*****
C23H16O9Cl2S          H4L      Chrome azuro1 S  CAS 1667-99-8 (711)
Chromazuro1 S;
-----
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	sp	oth/un	25°C	?	U			K(?)=4.3	1967SAa (102560)	674

```
*****
C23H18N2O3           HL           (5561)
2-(2-Acetylphenylhydrazono)-1,3-diphenyl-prop-1,3-dione;
C6H5.CO.C(CO.C6H5):N.NH.C6H4.COCH3
-----
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ho+++	gl	diox/w	30°C	75%	U			K1=10.63 B2=18.47	1988ESb (102595)	675

```
*****
C23H18O9S            H4L      Eriochrome cyan  CAS 3564-18-9 (433)
4'-Hydroxy-3,3'-dimethyl-2''-sulfofuchsone-5,5'-dicarboxylic acid;
-----
```



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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     sp  oth/un 25°C   ?  U           B2=9.8      1968MDc (102631) 676
*****
C23H24N4O2          L   Trichachnine      CAS 1251-85-0 (2606)
4,4'-Diantiprylmethane,
4,4'-phenylmethylene-bis-(1,2-dihydro-1,5-dimethyl-2-phenylpyrazol-3-one
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     sp  diox/w 25°C 100% U           K1=4.39     1995KMa (102675) 677
*****
C24H29N3O12S3      H6L                               (7355)
1,2,3-Tris((2-hydroxy-5-sulfobenzyl)amino)propane;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  NaCl   25°C 0.16M C           K1=14.71 B2=21.15 1998LCa (103017) 678
                               K(HoL+H)=6.44
*****
C24H42N6O12          H6L                               (6546)
1,4,7,10,13,16-Hexaazacyclooctadecane-N,N',N'',N''',N''',N''''-hexaethanoic acid;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  NaNO3  25°C 0.20M C           K1=23.88     1991KKa (103378) 679
                               K(Ho+H2L)=16.58
*****
C26H23N5O2          HL                               (5918)
Hippuric monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  diox/w 30°C 75% U           K1=11.65 B2=22.09 1985RSb (103881) 680
*****
C26H27N3O10          H4L                               (7231)
2-(((2-Amino-5-methylphenoxy)-methyl)-6-methoxy-8-aminoquinoline-N,N,N',N'-tetraetha
noic acid;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  R4N.X  25°C 0.10M C           K1=14.13     1993YTa (103964) 681
*****
C26H33N3O12S3      H6L                               (7354)
1,1,1-Tris(((2-hydroxy-5-sulfobenzyl)amino)methyl)ethane;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ho+++     gl  NaCl   25°C 0.16M C           K1=12.71     1998LCa (104064) 682
-----

```

K(HoL+H)=6.69

C27H24N4O L BAHP (1023)
Benzoylacetone-monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

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

Ho+++ gl diox/w 30°C 75% U K1=8.64 1983RSa (104385) 683

C27H36N4O12S3 H6L (7353)
Tris(((2-hydroxy-5-sulfobenzyl)amino)ethyl)amine;

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

Ho+++ gl NaCl 25°C 0.16M C H K1=7.67 B2=16.42 1995CHa (104564) 684
By calorimetry: DH(K1)=-21.33 kJ mol⁻¹, DS(K1)=74 J K⁻¹ mol⁻¹; DH(K2)=
-14.06, DS(K2)=121.

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

Ho+++ gl non-aq 25°C 100% U K1=3.29 1980MDb (104840) 685
Medium: Propylene carbonate.

Medium: propylene carbonate

C31H24N4O HL CAS 88700-85-0 (1409)
1,2-Diphenyl-1,2-ethanedione-3-(4-benzyl-6-phenyl)-pyridazinyl hydrazone;

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

Ho+++ gl diox/w 30°C 75% U I K1=9.78 1983RRa (105404) 686
In 75% MeOH: K1=7.75; 75% DMD: 6.49

C32H34N4O2 L CAS 163892-66-8 (7329)
1-Phenyl-1,1-di(2,3-dimethyl-1-phenyl-3-pyrazolyl-5-one)butane;C6H5C(C3H7)((C2N2(O)
(CH3)2(C6H5))2

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

Ho+++ sp diox/w 25°C 100% C K(La(NO3)3+L)=4.13 1997KMa (105631) 687

C33H45N7O3 L CAS 345349-93-1 (9178)
Tris[6-((2-N,N-diethylcarbamoyl)pyridyl)methyl]amine;

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

Ho+++ nmr KCl 25°C 1.0M C K1=2.21 2004BRa (105969) 688

Method: 1H nmr measurements in D20.

C36H60O30 L a-Cyclodextrin CAS 10016-20-3 (6946)
alpha-Cyclodextrin, Cyclohexaamylose;

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

Ho+++ gl NaCl 25°C 0.10M U I K1=3.66 1999FBa (106465) 689
In 0.1 M Me4NCl, K1=3.74.

C37H44N2O13S H6L MeThymol Blue (428)
3,3'-Bis(N,N-di(carboxymethyl)aminomethyl)thymolsulfonephthalein;

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

Ho+++ gl NaClO4 30°C 0.10M U 1980NAb (106605) 690
K(Ho+H3L)=4.51
K(Ho+H2L)=7.22
K(HoH2L+H)=4.43

Also data for HoHnL(OH) species

C47H46N6O4 L (7367)
2,6-Bis(1-(3,5-dimethoxybenzyl)benzimidazol-2-yl)-4-(4-diethylamino)phenyl)pyridine
;

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

Ho+++ gl non-aq 25°C 100% C 1997PBa (107316) 691
K3=4.8

Medium: CH3CN; 0.1 M Et4NClO4

C52H69NO7 L CAS 178626-47-6 (8569)
5,11,17,23-Tetra-t-butyl-25-(diethylcarbamoyl)methoxy-27-carboxymethoxy-26,28-dihydroxycalix[4]ar

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

Ho+++ sp non-aq 25°C 100% C K1=5.98 2002BBc (107513) 692
Method: uv/vis spectroscopy. Medium: DMSO. Also data for the 25-methoxy-ethyl(carbamoylmethox)- and 25-di-(n-hexyl-carbamoyl)methoxy- derivatives

C62H94N2O4S2 L (8109)
5,11,17,23-Tetrakis(1,1-dimethylethyl)-25-27-bis[2-methylthio]ethoxy]...calix(4)arene;

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

Ho+++ cal non-aq 25°C 100% U H K1=3.89 2001NJa (107704) 693
Method: microcalorimetry. Medium: MeCN.. DH(K1)=-143 kJ mol-1

C76H116N4O8 L (8156)
p-tert-Butylcalix(4)arene tetradiisopropylethanoamide;

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

Ho+++ cal non-aq 25°C 100% U H K1=4.63 2001NJa (107881) 694
Method: microcalorimetry. Medium: MeCN. DH(K1)=-95.8 kJ mol-1

Polymer HL Bleomycin (2324)
Bleomycin A2, B2 etc.

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

Ho+++ sp oth/un 25°C ? U 1980LPb (108090) 695
K1eff=4.80 pH 6.8
Method: fluorescence

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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

 END