

SC-Database

Software version = 5.81 Data version = 4.62
 Experiment list contains 1172 experiments for
 (no ligands specified)
 Metal : Pr+++
 (no references specified)
 (no experimental details specified)

 e- HL Electron (442)
 Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	oth	none	25°C	0.0	U				1974JOb (813)	1
								K(Pr+3e=Pr(s))=-119.2(-2.35V) K(Pr+e=Pr(II))=-51(-3.0V)		

Method: Literature evaluated data

Pr+++	oth	none	25°C	0.0	U				1952LAb (814)	2
								K(Pr+3e)=-124.8(-2470 mV)		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	sol	none	25°C	0.0	C				1992FIa (1158)	3
								Kso(PrAsO4)=-22.03		

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
Pr+++	sp	non-aq	25°C	100%	U			K1=0.6	1974KBb (2240)	4
								Medium: propanol, 1 M LiClO4. K1=0.4 to 0.9		

Pr+++	sp	alc/w	25°C	50%	U	I		K1=0.12	1973KPe (2241)	5
								Medium: 50% w/w MeOH/H2O, 3 M LiClO4. K1=-0.23(0%),0.68(90%). K1in=-0.7(90%)		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaClO4	25°C	0.70M	C			K1=5.71	2004LBb (3346)	6
								K(Pr+HCO3=PrHCO3)=1.20		

Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.23, B2=12.08,

$K(\text{Pr}+\text{HCO}_3=\text{PrHCO}_3)=2.25$, $K(\text{Pr}+\text{HL}=\text{PrL}+\text{H})=-3.10$, $K(\text{Pr}+2\text{HL}=\text{PrL}_2+2\text{H})=-8.58$

 Pr+++ dis NaClO4 25°C 0.70M C I K1=5.50 B2= 9.56 1998LBb (3347) 7
 Method: H2O/tributylphosphate distribution and ICP-mass spectrometry.
 Values calculated for I=0.0 M, K1=7.48, B2=12.63.

Pr+++ sol none 25°C 0.0 C 1986FMa (3348) 8
 Kso(Pr2(CO3)3)=-33.19

Pr+++ sol none 25°C 0.0 C 1986HMa (3349) 9
 Kso(Pr2(CO3)3)=-33.19

Method: spectrophotometry.

 Pr+++ dis oth/un 20°C 2.5M C 1979DBb (3350) 10
 B4=13.78

Media: 2.5 M (NH4)2NO3/hexane. Analysis by NAA. By competition with edta;
 K1(Pr(edta))=16.55 recalculated for I=2.5 from J.Am.Chem.Soc.,75 1953,4196

Pr+++ sol oth/un 25°C var U 1964FDa (3351) 11
 B4=11.17
 Kso(Pr2L3(H2O)3)=-27.0

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	con	none	25°C	0.00	M		K1=3.82	1972FIa (3683)	12

Pr+++	cal	none	25°C	0.00	M	H	K1=3.64	1972SCd (3684)	13
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DH(K1)=3.6 kJ mol⁻¹, DS=81.6 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
Pr+++	dis	NaCl	25°C	1.0M	C		K1=-0.47	1997HTb (5492)	14

Method: by solvent extraction from 1.0 M NaCl into CHCl3, 0.1 M
 1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.

Pr+++	cal	non-aq	25°C	100%	U	H	K1=3.25 K3=1.42 K4=0.49	B2=5.38 1991ITa (5493)	15
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Medium: DMF, 0.2 M Et4NClO4. DH(K1)=14.1 kJ mol⁻¹, DH(K2)=10.3, DH(K3)=18
 DH(K4)=85. DS(K1)=109, DS(K2)=75, DS(K3)=87 J K⁻¹ mol⁻¹

Pr+++	sol	NaClO4	25°C	?	U		K1=0.44	1982MAa (5494)	16
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Pr+++	cal	non-aq	25°C	100%	U		K1=2.23 B2=3.71	1980VCa (5495)	17
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Medium: dimethylacetamide

Pr+++ sp non-aq 25°C 100% U I K1=4.26 1973KBd (5496) 18
Medium: propanol, 1.69 M LiCl. K1=4.16(I=3.28),4.12(I=3.8),3.87(I=6.07),
3.42(I=8.43). In LiClO4: K1=3.25(I=0.2),2.94(I=0.5),1.66(I=3)

Pr+++ sp NaClO4 15°C 3.0M U T H K1=1.60 1973KBd (5497) 19
Medium: 3 M LiClO4. DH(K1)=11.5 kJ mol⁻¹. K1=1.74(35 C), 1.79(45 C).
I=0(corr), 25 C: K1=4.34. K1in, 25 C: 0.38(I=0.5), 0.59(I=1), 0.65(I=3)

Pr+++ sp alc/w 25°C 50% U TI K1=0.37 1971KBf (5498) 20
K1in=-0.77
Medium: 50% w/w MeOH/H2O, 3 M LiClO4. K1=-0.09(0%); K1=0.85,K1in=-0.15(100%)

Pr+++ sp alc/w 25°C 50% U I K1=0.41 1971KBg (5499) 21
K1in=-0.65
Medium: 50% v/v EtOH/H2O, 3 M LiClO4. K1=0.85, K1in=-0.15(90%)

Pr+++ sp none 25°C 0.0 U K1=-2.12 1970KBe (5500) 22
K1in=-3.0

Pr+++ ISE NaClO4 25°C 1.0M U K1=0.20 1965GSb (5501) 23

Pr+++ ISE oth/un 25°C 0.0 U Ks(Pr(OH)2.5Cl0.5)=-19.26 1963AKa (5502) 24

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

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

Pr+++ ix oth/un 25°C 0.02M C T H K1=3.35 B2= 5.66 2004LMa (7109) 25
Medium: 0.025 M HNO3. Applying Pitzer parameters: at I=0, K1=8.86.
Data for 5 to 45 C. DH(K1)=11.0 kJ mol⁻¹, DH(B2)=19.6.

Pr+++ ISE NaClO4 25°C 0.0 C I K1=3.84 2000Lba (7110) 26
Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaClO4.
At I=0.70 M, K1=2.906.

Pr+++ ix KNO3 25°C 0.02M C K1=3.31 B2= 5.67 1999SBc (7111) 27
Medium: 0.025 M HNO3. Additional method: ICP-MS.
Assumed K1(HF) = 3.03, derived from literature values.

Pr+++ ISE none 25°C 0.0 C H K1=2.96 B2=6.88 1989MJa (7112) 28
Kso=-17.4
Also by conductivity and radiometry. DH(Kso)=54.2 kJ mol⁻¹; DS=-145.

Pr+++ ISE R4N.X 25°C 0.50M C K1=2.96 B2=6.88 1989MJb (7113) 29

Pr+++ sol R4N.X 25°C 0.50M C H K1=2.80 B2= 6.23 1989MJc (7114) 30

Kso(PrF3)=-17.4

Medium: 0.50 M NH4NO3. [F-] determined by ISE. By conductivity, Kso=-16.7; DH(Kso)=54.2 kJ mol-1, DS(Kso)=-145 J K-1 mol-1.

Pr+++ cal NaClO4 25°C 1.00M C H 1988GBa (7115) 31
DH(K1)=14.5 kJ mol-1; DS(K1)= 106 J mol-1 K-1

Pr+++ ISE NaNO3 25°C 0.10M U H 1987SMd (7116) 32
K(PrA+L)=1.93
DH=1.40 kJ mol-1, DS=41.6 J K-1 mol-1. H3A=HEDTA

Pr+++ ISE NaCl 25°C 1.00M C K1=2.813 1985BBb (7117) 33

Pr+++ gl KCl 25°C 1.00M U M 1981KTb (7118) 34
K(PrEDTA+F)=1.64
K(Pr(EDTA)F+F)=0.30

Pr+++ EMF NaClO4 25°C 1.0M U H K1=3.01 1967WCa (7119) 35
By distribution: K1=3.16. calorimetry: DH(K1)=24.0 kJ mol-1, DS=138.4

H2PO2- HL Hypophosphite CAS 6303-21-5 (6304)
Hypophosphite;

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

Pr+++ sp oth/un ? var U K1=1.33 1970PLe (7651) 36

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

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

Pr+++ sol oth/un 25°C 0.0 U 1966FPb (8548) 37
Kso=-10.77

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

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

Pr+++ sol oth/un 25°C dil U 1974LOa (8612) 38
Kso(Pr(H2IO6)(H2O)3)=-10.40

Mo04-- H2L Molybdate (443)
Molybdate;

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

Pr+++ con oth/un 25°C .001M U K1=4.42 1968DKc (8753) 39

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

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

Pr+++ gl oth/un 20°C 0.10M U 1989SBb (8779) 40
B(PrHL)=8.25
B(Pr2L)=8.92
B(PrH2L)=10.62

NH3O L Hydroxylamine; CAS 5470-11-1 (1808)
Hydroxylamine; NH2.OH

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

Pr+++ vlt KCl 25°C 1.0M C H 1984KCa (9271) 41
K1eff=3.1

Method: polarography. Medium pH 2.4. At 35 C, K1eff=2.9.
DH(K1eff)=-43.9 kJ mol-1

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

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

Pr+++ cal NaClO4 25°C 2.0M C IH K1=-0.08 1998BMb (9873) 42
DH(K1)=2.2 kJ mol-1. From Pitzer extrapolation to I=0.0, K1=0.77,
DH(K1)=-0.1 kJ mol-1

Pr+++ sp non-aq 25°C 100% U K1=0.4 1974KBb (9874) 43
Medium: PrOH, 1 M LiClO4. K1=0.1 to 0.6

Pr+++ sp KNO3 var U K1=-0.8 B2=-3.2 1973LEa (9875) 44
Medium: HNO3

Pr+++ sp NaClO4 20°C 4.10M U K1=-0.18 1970ASa (9876) 45

Pr+++ sp KNO3 ? var U 1970KSf (9877) 46
K(Pr+3L+HL)=-0.52
K(PrL3HL+2HL)=-1.41

N2H4 L Hydrazine CAS 302-01-2 (2117)
Hydrazine; H2N.NH2

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

Pr+++ vlt KCl 25°C 1.0M C H 1984KCa (10086) 47
K1eff=3.4

Method: polarography. Medium pH 2.4. At 35 C, K1eff=3.0.
DH(K1eff)=-77.5 kJ mol-1. N-phenylhydrazine: K1eff=3.0 (25 C), 2.6 (35 C)

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

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

Pr+++ sp NaClO4 25°C 2.0M U K1=3.46 1975EAb (10253) 48

OH- HL Hydroxide (57)
Hydroxide;

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

Pr+++ gl NaCl 25°C 1.0M C 2003RSa (11949) 49

*K1=-8.58
*Kso(Pr(OH)3)=19.75

*Kso by radiometric titration using 142Pr.

Pr+++ gl NaClO4 25°C 0.0 C IH 2000KBa (11950) 50

*K1=-8.32

In 0.7 M NaClO4, *K1=-8.62. DH(*K1)=54 kJ mol-1.

Pr+++ gl NaCl 25°C 0.10M U I 1999FBa (11951) 51

*B(1,3)=-24.00

In 0.1 M Me4NCl, *B(1,3)=-24.28.

Pr+++ gl oth/un 60°C 3.00M C 1989CPc (11952) 52

*B(1,1)=-8.74
*B(2,1)=-9.34
*B(2,2)=-14.23
*B(3,5)=-32.76

Medium: LiClO4

Pr+++ gl NaClO4 25°C 3.00M U 1982BBc (11953) 53

*K1=-9.56
*B(2,2)=-16.31

Pr+++ dis NaClO4 ? 0.10M U 1971GDb (11954) 54

*K1=-7.1

Medium: LiClO4

Pr+++ vlt none 25°C 0.00 U 1970BKd (11955) 55

Kso(Pr(OH)3(s)=Pr+3OH)=-23.49

Pr+++ oth oth/un rt 10% U 1967PBb (11956) 56

Kso=-27.8
K(HoL3(s)=HoL3)=-4.9

Medium: 10% sea water. Method: Tyndall scattering

Pr+++ gl NaClO4 25°C 0.30M U 1966FKa (11957) 57

*K1=-8.55

Pr+++ oth oth/un 20°C dil U 1966OPa (11958) 58
Kso=-22.3

Pr+++ sol none 25°C 0.0 M 1963AKb (11959) 59
Kso=-22.08

Pr+++ EMF NaClO4 25°C 3.0M U 1956TGa (11960) 60
*K1=-8.5

Method: quinhydrone electrode

Pr+++ sol none 25°C 0.0 U 1954RAa (11961) 61
K(Pr(OH)3(s)=Pr(OH)3)=-3.30
*K1=-9.80
*K2=-3.70
*K3=-3.15
Kso(Pr(OH)3(s))=-28.66, K(Pr(OH)3(s)+OH=Pr(OH)4)=-2.64. Quinhydrone el. used

Pr+++ gl oth/un 25°C var U 1951MFb (11962) 62
Kso(Pr(OH)3)=-21.17

Pr+++ gl oth/un 25°C var U 1944MKa (11963) 63
Kso(Pr(OH)3)=-19.6

Pr+++ sol oth/un 100°C var U 1932ENa (11964) 64
Kso=1.90 + y

Kso: K(Pr(OH)3(s)=Pr+3OH); y=Kso for Y+++

O2-- H2L Peroxide CAS 7772-84-1 (2813)
Peroxide; -0.0-

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

Pr+++ gl NaNO3 25°C 0.10M C 2003MYd (12695) 65
K(2Pr+2H2O2=Pr2(O2)2(OH)2+6H)=-31.4,
K(2Pr+2H2O2=Pr2(O2)3(O2H)(OH)2+5H)=-24.6. Also spectrophotometric values.

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

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

Pr+++ sol none 25°C 0.0 M 1997LBd (13304) 66
Kso(PrP04)=-26.43

Calculated from data for 0.10 M HClO4 solution.

Pr+++ sol oth/un 25°C 0.0 C I 1993FKb (13305) 67
Kso(PrP04)=-26.85

In synthetic seawater, Ks(PrP04)=-24.35.

Pr+++ sol none 25°C 0.0 C 1991FBa (13306) 68
Kso(PrPO4)=-26.06

Pr+++ sol NaClO4 100°C 0.0 C 1985JBa (13307) 69
Kso(PrPO4.xH2O)=ca.-26

Disolution of PrPO4.xH2O in 0.02-0.004 M HNO3. Calculated for I=0 M.

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

Pr+++ gl KNO3 25°C 0.10M U T H B2=8.3 1974KRa (13896) 70
K(Pr+2HL)=6.3
K(Pr+2HL)=6.7 and B2=8.5 (35 C), K(Pr+2HL)=6.2 and B2=8.2 (45 C)
DH(Pr+2HL)=-11 kJ mol-1; DH(B2)=-10

Pr+++ gl NaClO4 30°C 0.30M U 1963KUa (13897) 71
K(Pr+HL)=6.98

Pr+++ gl NaClO4 ? 0.10M U B2=16.95 1962RKa (13898) 72
K(Pr+HL)=4.86
K(Pr+2HL)=8.64

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

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

Pr+++ sp oth/un rt 1.00M U K1=-0.92 1970POa (14109) 73
Medium: HReO4

Pr+++ sp oth/un rt U K2=-1.13 1970POa (14110) 74
Medium: HReO4

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

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

Pr+++ dis oth/un 25°C 1.0M C K1=0.34 1997HTb (15230) 75
Method: by solvent extraction from 1.0 M NaSCN into CHCl3, 0.1 M
1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.

Pr+++ sp NaClO4 25°C 1.00M U I K1=0.27 B2=0.30 1993SMb (15231) 76

Pr+++ sp NaClO4 ? 3.0M U K1=0.3 1974NBd (15232) 77
Medium: LiClO4. K1 in range 0.1 to 0.5

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

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

Pr+++ sol oth/un 25°C 0.66M C K1=1.95 2004SBb (16473) 78
Method: solubility of BaSO4 in 0.117 m PrCl3 solution.
Calculated for I=0, K1=3.62.

Pr+++ cal none 25°C 0.0 U H 1974POa (16474) 79
DH(K1)=19.8 kJ mol-1

Pr+++ oth oth/un 25°C 0.0 U K1=3.62 1973FPb (16475) 80
K1in=0.88
Method: ultrasonic absorption. In D20: K1=3.67, K1is=0.70

Pr+++ oth none 25°C 0.0 U K1=3.67 1973FPb (16476) 81
K1is=0.70
Method: ultrasonic absorption. Medium: D20

Pr+++ cal oth/un 25°C 0.0 U H 1969FPa (16477) 82
DH(K1)=16.4 kJ mol-1

Pr+++ cal oth/un 25°C 0.0 U H K1=3.58 B2=5.44 1969IEa (16478) 83
DH(K1)=14.6 kJ mol-1, DH(K2)=4.81; DS(K1)=117.9 J K-1 mol-1, DS(K2)=51.8

Pr+++ ISE NaClO4 25°C 2.0M U H K1=1.27 B2=1.88 1967CCd (16479) 84
By calorimetry: DH(K1)=16.5 kJ mol-1, DS=79.4 J K-1 mol-1

Pr+++ con oth/un 25°C 0.0 U K1=3.85 1966ERa (16480) 85

Pr+++ sp oth/un 25°C 0.0 U K1=3.37 1964BMb (16481) 86

Pr+++ sol oth/un 20°C 0.0 U K1=2.40 1954KOb (16482) 87

Pr+++ con oth/un 25°C 0.0 U K1=3.62 1954SJa (16483) 88

S203-- H2L Thiosulfate CAS 73686-28-7 (177)
Thiosulfate;

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

Pr+++ con oth/un 32°C var U 1950DUa (16896) 89
B(Pr2L3)=10.52

CH4O L Methyl alcohol CAS 67-56-1 (597)
Methanol; CH3.OH

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

Pr+++ gl alc/w 25°C 100% C 1997ACa (17897) 90

*K1=-6.96
*B2=-16.01
*B3=-26.53
*B4=-39.76

Medium: methanol, 0.01 M NEt4ClO4. *B(2,5)=-39.05. *K1: Pr+MeOH=Pr(OMe)+H.

CH5N L Methylamine CAS 74-89-5 (155)
Methylamine; CH3.NH2

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

Pr+++ nmr oth/un 39°C 0.1% U M 1977ERc (18027) 91
Kout(Pr(EDTA)+HL)=0.30

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

Pr+++ gl NaClO4 20°C 0.10M U K1=2.44 B2=4.34 1964PSd (18428) 92
K3=1.0

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

Pr+++ ix R4N.X 25°C 0.05M C K1=5.32 B2= 9.63 2001SBf (19037) 93
K(Pr+HL)=2.09

Medium: 0.05 M NH4NO3. At I=0, K1=6.25, B2=10.82.

Pr+++ gl KCl 25°C 1.0M U M 1988KTa (19038) 94
K(Pr(edta)+L)=2.95

Pr+++ gl KNO3 35°C 0.10M U M K1=6.29 1986RMb (19039) 95
B(PrL(cytidine))=9.81

C2H4O2 HL Acetic acid CAS 64-19-7 (36)
Ethanoic acid; CH3.COOH

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

Pr+++ gl KCl 25°C 1.00M U K1=1.890 B2=2.886 1990TPb (20133) 96

Pr+++ EMF diox/w ? 60% U I K1=3.60 B2=5.88 1971MCb (20134) 97
B3=7.44

Medium: 0.5(NaClO4), 0-70% dioxan. 0%, K1=1.90, B2=3.45. 60%, K1=3.60,
B2=5.88, B3=7.44

Pr+++ EMF alc/w ? 60% U I K1=2.54 B2=4.71 1970Mca (20135) 98
 B3=6.27
 B4=7.16
 B5=7.70

Medium: 2(NaClO4), 0-80% EtOH. 0%, K1=1.96, B2=2.83, B3=3.53, B4=3.58.
 80%, B2=6.81, B3=9.71, B4=11.25, B5=12.02, B6=12.44

Pr+++ gl alc/w 25°C 95% U H K1=5.11 B2=8.93 1967Gwa (20136) 99
 B3=11.54
 B4=12.49

Medium: 95% MeOH, 0.5 M NaClO4. By calorimetry:DH(K1)=12.1 kJ mol⁻¹,DS=138.4
 J K⁻¹ mol⁻¹; DH(K2)=11.0,DS=109.9; DH(K3)=6.7,DS=71.9; DH(K4)=2.9,DS=29.3

Pr+++ cal NaClO4 25°C 2.0M C H 1964GRa (20137) 100
 DH(K1)=7.192 kJ mol⁻¹, DS(K1)=59.4 J K⁻¹ mol⁻¹; DH(B2)=17.38, DS(B2)=113;
 DH(B3)=15.1, DS(B3)=114.

Pr+++ gl NaClO4 20°C 0.10M U K1=2.18 B2=3.63 1962KPa (20138) 101

Pr+++ EMF NaClO4 20°C 2.0M U K1=1.81 B2=2.81 1958SOa (20139) 102
 B3=3.28
 B4=3.3

Method: quinhydrone electrode

C2H4O2S H2L Thioglycolic CAS 68-11-1 (596)
 Mercaptoethanoic acid; HS.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
 Pr+++ gl NaClO4 25°C 0.20M U K1=6.08 B2=11.41 1996PJa (20357) 103

Pr+++ gl NaClO4 25°C 0.20M U K1=5.94 B2=10.07 1995Pjb (20358) 104

Pr+++ gl NaClO4 25°C 0.20M U M K1=3.59 1986LSb (20359) 105
 K(Nd(EDTA)+L)=3.53

Pr+++ gl KNO3 30°C 0.10M U M 1980RTa (20360) 106
 K(Pr(CDTA)+L)=2.98

Pr+++ gl NaClO4 20°C 0.10M U 1964PKa (20361) 107
 K(Pr+HL)=2.03
 K(PrHL+HL)=1.04

Pr+++ gl KCl 30°C 0.10M U 1962CTa (20362) 108
 K(Pr+HL)=2.40
 K(PrHL+HL)=2.44

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaClO4	25°C	0.20M	U			K1=5.80 B2=10.56	1996PJa (20609)	109
Pr+++	EMF	NaClO4	25°C	1.00M	U	M		K1=2.39 B2=4.46 B(PrLA)=4.74	1991WPb (20610)	110
H2A=maleic acid										
Pr+++	gl	NaClO4	25°C	0.20M	U	M		K1=3.71 K(Pr(EDTA)+L)=3.58	1986LSb (20611)	111
Pr+++	gl	NaClO4	25°C	0.20M	U	M		K1=3.75 K(Pr(edta)+L)=3.64	1985LSf (20612)	112
Pr+++	gl	KNO3	32°C	0.10M	U			K(Pr+HL=PrL+H)=-1.17 *K(PrL)=-6.36 K(Pr+2HL=PrL2+2H)=-2.14 *K(PrL2)=-5.80	1980PPF (20613)	113
Pr+++	gl	NaClO4	25°C	0.50M	C	T		K1=2.49 B2=4.37 B3=5.48 B4=6.6	1977CMA (20614)	114
Pr+++	gl	NaClO4	20°C	0.10M	U			K1=2.78 B2=4.68 B3=5.9	1964PKb (20615)	115
Pr+++	gl	KCl	30°C	0.10M	U			K1=2.98 B2=5.67	1962CTa (20616)	116
Pr+++	EMF	NaClO4	20°C	2.0M	U			K1=2.43 B2=4.19 B3=5.4 B4=5.9 B5=5.7	1959SOB (20617)	117

Method: quinhydrone electrode

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KNO3	25°C	0.0	M T H			K1=5.62 K(Pr+HL=PrL+H)=-4.02	2003MBa (21683)	118
Extrapolated from data for I=0.07-0.32 M KNO3. DH(K1)=-106.8 kJ mol ⁻¹ , DS(K1)=-250.8 J K ⁻¹ mol ⁻¹ ; DH(Pr+HL)=-75.1, DS(Pr+HL)=-328.9.										
Pr+++	gl	NaClO4	25°C	0.20M	U			K1=4.40 B2= 8.14	1996PJa (21684)	119
Pr+++	gl	NaClO4	25°C	0.20M	U			K1=4.40 B2= 8.14	1995PJB (21685)	120
Pr+++	gl	KNO3	25°C	0.20M	U	M		K1=6.25	1990LSb (21686)	121

K(Pr(phen)+L)=5.95

Pr+++ vlt KCl 25°C 1.0M C T K1=4.40 1990NKd (21687) 122
Method: polarography. At 35 C, K1=3.70

Pr+++ gl NaClO4 25°C 0.20M U K1=4.40 B2= 8.14 1987PPa (21688) 123

Pr+++ gl KNO3 35°C 0.10M U 1987RRc (21689) 124
K(Pr+HL)=3.53

Pr+++ gl NaClO4 25°C 0.20M U M K1=5.55 1986LSb (21690) 125
K(Pr(EDTA)+L)=4.63

Pr+++ gl KNO3 35°C 0.10M U M 1986RMB (21691) 126
K(Pr+HL)=3.53

K(Pr+HL+cytidine)=8.34

Pr+++ gl NaClO4 25°C 0.20M U M K1=5.55 1985LSe (21692) 127
K(Pr(edta)+L)=4.63.

Pr+++ EMF KCl 25°C 1.0M U M 1977GMA (21693) 128
K(PrA+L)=3.20
K(PrA+HL)=2.86
K(PrA+H2L)=3.03

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

Pr+++ gl NaClO4 30°C 0.2M U T K1=4.50 1977MSf (21694) 129

Pr+++ gl KCl 30°C 0.10M U T K1=3.64 B2=6.96 1962CTa (21695) 130

C2H6N2O L Acethydrazide CAS 1068-57-1 (2566)
Ethanoic acid hydrazide, Acetylhydrazine; CH3.CO.NH.NH2

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

Pr+++ gl NaClO4 20°C 0.10M U 1974PJa (21966) 131
K(PrL+A)=3.41

HA=pentane-2,4-dione

C2H6OS HL CAS 60-24-2 (841)
2-Mercaptoethanol; HS.CH2.CH2.OH

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

Pr+++ gl NaClO4 25°C 0.10M U T K1=5.93 1981SKb (22077) 132
Temp range 15-35. K1 at 15 = 6.02; K1 at 45 = 5.78

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

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

Pr+++ sp non-aq 25°C 100% U 1992MBb (22119) 133

K8=1.4
K9=1.0
K10=0.6

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

Pr+++ gl NaClO4 22°C 0.10M U 1972MCd (22154) 134

K(PrH-1L+H)=7.90

C2H7N L Dimethylamine CAS 124-40-3 (802)
Dimethylamine; CH3.NH.CH3

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

Pr+++ nmr oth/un 30°C ? U M 1977ERc (22227) 135

Kout(Pr(EDTA)+HL)=0.62

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

Pr+++ ISE non-aq 25°C 100% C H K1=1.55 B2=2.81 1992CBa (23223) 136

B3=3.50

Medium: DMSO, 0.10 M Et4NClO4. By calorimetry, DH(K1)=-22.3, DH(B2)=-50.4,
DH(B3)=-82 kJ mol⁻¹.

C2H8O7P2 H5L CAS 76267-75-9 (4226)
2-Hydroxyethylidenediphosphonic acid; HO.CH2.CH(P(O3H)2)

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

Pr+++ sp oth/un ? ? U M 1973KTa (23410) 137

K(PrOH+2L)=4.26

pH 10

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

Pr+++ gl oth/un 25°C ? U M K1=2.16 1998PAa (23993) 138

K(PrL+acac)=5.19
 K(Pr(acac)L+acac)=3.78

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
Pr+++	nmr	NaClO4	25°C	2.00M	U	H	K1=1.72	1980CCa (24068)	139

DH=-4.72 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
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.26 K(Pr(EDTA)+L)=3.43	1986LSb (24535)	140

Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.30 K(Pr(edta)+L)=3.48	1985LSf (24536)	141
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Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.26 K(Pr(edta)+L)=3.43	1984LSd (24537)	142
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Pr+++	gl	NaClO4	25°C	0.10M	U		K1=4.30	1972DCc (24538)	143
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Pr+++	oth	KCl	27°C	0.10M	U	T	K1=4.2	1972SOa (24539)	144
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35 C: 4.60; 40 C: 4.82

Pr+++	gl	NaClO4	25°C	1.00M	U		K1=3.27 B2=5.61 B(PrHL)=6.47 B(PrHL2)=9.26	1971DGa (24540)	145
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Pr+++	ix	NaClO4	25°C	0.15M	U		K(Pr+HL)=1.48 K(PrHL+HL)=1.04	1968KKc (24541)	146
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Pr+++	gl	KNO3	25°C	0.10M	U		K1=3.91 B2=6.30	1968PFa (24542)	147
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 C3H4O5 H2L Tartronic acid CAS 80-69-3 (839)
 Hydroxypropanedioic acid; HO.CH(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	oth/un	20°C	?	U		K1=6.06	1964ZTa (24619)	148

 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

Pr+++ gl KCl 25°C 0.20M U K1=3.76 1973LPb (24631) 149

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

Pr+++ gl diox/w 20°C 50% U K1=5.08 1971MAf (24648) 150
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

Pr+++ gl diox/w 20°C 50% U K1=6.37 B2=11.80 1971MAf (24810) 151
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

Pr+++ EMF diox/w 25°C 50% U I K1=3.48 B2=5.42 1971Mcc (25043) 152
B3=6.61
Medium: 0-70% dioxan, 0.5 M NaClO4. 0%:K1=1.85, B2=3.06; 20%:K1=2.17, B2=3.86
40%: K1=2.97, B2=4.67, B3=6.03; 60%: K1=3.78, B2=6.15, B3=7.75. 70%: B3=8.67

Pr+++ gl NaClO4 25°C 2.0M U K1=1.78 B2=2.86 1965CGa (25044) 153

Pr+++ gl NaClO4 20°C 0.10M U K1=2.12 B2=3.46 1964PKa (25045) 154

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

Pr+++ gl NaClO4 25°C 0.20M U K1=6.24 B2=11.88 1996PJa (25164) 155

Pr+++ gl NaClO4 25°C 0.20M U K1=5.08 B2= 9.66 1995PJb (25165) 156

Pr+++ gl NaClO4 25°C 2.00M U 1968CMa (25166) 157
K(Pr+HL)=1.89

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
Pr+++	gl	NaClO4	25°C	2.00M	U			K(Pr+HL)=1.57	1968CMa (25223)	158

Pr+++	gl	KCl	30°C	0.10M	U			K(Pr+HL)=2.56 K(PrHL+HL)=2.49	1962CTa (25224)	159
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 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
Pr+++	gl	NaClO4	25°C	2.00M	U			K1=1.62	1969JcC (25277)	160

Pr+++	gl	KCl	30°C	0.10M	U			K1=2.65 B2=5.23	1962CTa (25278)	161
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 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
Pr+++	gl	NaClO4	25°C	0.20M	U			K1=6.32 B2=11.86	1996PJa (25520)	162

Pr+++	gl	NaClO4	25°C	0.20M	U	M		K1=3.98 K(Pr(EDTA)+L)=3.55	1986LSb (25521)	163
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Pr+++	gl	NaClO4	25°C	0.20M	U	M		K1=4.02 K(Pr(edta)+L)=3.61	1985LSf (25522)	164
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Pr+++	gl	KNO3	30°C	0.10M	U			K(Pr+HL=PrL+H)=-0.41 *K(PrL)=-5.29 K(Pr+2HL=PrL2+2H)=-0.86 *K(PrL2)=-4.22	1983MPc (25523)	165
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Pr+++	gl	NaClO4	25°C	0.50M	U			K1=2.55 B2= 4.23 B3=5.7	1981JPa (25524)	166
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Additional method: polarimetry

Pr+++	ix	NaClO4	20°C	0.20M	U			K1=2.46 B2=4.27 B3=5.62	1968WZa (25525)	167
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Pr+++	gl	NaClO4	25°C	0.10M	U			K1=2.69 B2=4.96	1966GGb (25526)	168
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Pr+++	gl	NaClO4	25°C	0.20M	U			K1=2.58 B2=4.28 K3=0.85	1964DVa (25527)	169
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Pr+++	gl	NaClO4	20°C	0.10M	U			K1=2.85 B2=4.90	1964PKb (25528)	170
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B3=6.1

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

Pr+++ gl NaClO4 20°C 0.10M U K1=2.07 B2=3.25 1964PKa (25606) 171

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

Pr+++ gl NaClO4 25°C 0.20M U K1=4.57 B2= 8.57 1996PJa (26243) 172

Pr+++ gl NaClO4 25°C 0.20M U K1=4.57 B2= 8.57 1995Pjb (26244) 173

Pr+++ gl NaNO3 25°C 0.0 U K1=4.93 1991ADb (26245) 174
Extrapolated from data for 0.01-0.1 M NaNO3. Data for 35 and 45 C.

Pr+++ gl NaCl 37°C 0.15M U M K1=3.49 B2=6.68 1991DWb (26246) 175
B(PrH2L(Glu))=22.78

Pr+++ gl KNO3 25°C 0.20M U M K1=6.38 1990LSb (26247) 176
K(Pr(phen)+L)=6.15

Pr+++ gl KNO3 35°C 0.10M U K1=5.05 1990RSe (26248) 177

Pr+++ gl NaClO4 25°C 0.20M U K1=4.57 B2= 8.57 1987PPa (26249) 178

Pr+++ gl NaClO4 25°C 0.20M U M K1=6.36 1986LSb (26250) 179
K(Pr(EDTA)+L)=4.99

Pr+++ gl NaClO4 25°C 0.20M U M K1=6.36 1985LSe (26251) 180
K(Pr(edta)+L)=4.99.

Pr+++ gl NaClO4 25°C 0.20M U M K1=6.36 1984LSd (26252) 181
K(Pr(edta)+L)=4.99

Pr+++ gl KNO3 25°C 0.10M U K1=4.7 1967EMb (26253) 182

C3H7NO2 HL B-Alanine CAS 107-95-9 (575)
3-Aminopropanoic acid; H2N.CH2.CH2.COOH

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

Pr+++ gl NaClO4 25°C 0.20M U M K1=6.08 1986LSb (26474) 183
K(Pr(EDTA)+L)=4.49

Pr+++ gl NaClO4 25°C 0.20M U M K1=6.08 1984LSd (26475) 184
K(Pr(edta)+L)=4.49

Pr+++ gl KCl 30°C 0.10M U T K1=2.92 1962CTa (26476) 185

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

Pr+++ gl NaNO3 15°C 0.10M U T K1=13.40 B2=18.65 1984IDa (26823) 186
At 30 C, K1=13.30, K2=5.15.

Pr+++ gl oth/un 25°C 0.05M U M 1981KJa (26824) 187

B(PrL(ethanediol))=17.80

B(PrL(ethanediol)2)=22.82

B(PrL2(ethanediol))=25.04

Pr+++ gl oth/un 25°C 0.05M U M 1981KJa (26825) 188

B(PrL(prop-1,2-diol))=16.68

B(PrL(prop-1,2-diol)2)=23.37

B(PrL2(prop-1,2-diol))=25.02

Pr+++ gl oth/un 25°C 0.05M U M 1981KJa (26826) 189

B(PrLA)=17.88

B(PrLA2)=25.60

B(PrL2A)=27.77

A= 2-butene-1,4-diol

Pr+++ gl oth/un 25°C 0.05M U M 1981KJa (26827) 190

B(PrL(but-2,3-diol))=17.41

B(PrL(but-2,3-diol)2)=22.99

B(PrL2(but-2,3-diol))=24.32

Pr+++ gl oth/un 25°C 0.05M U M 1981KJa (26828) 191

B(PrL(pent-2,4-diol))=16.60

B(PrL(pent-2,4-diol)2)=21.72

B(PrL2(pent-2,4-diol))=24.29

Pr+++ gl oth/un 25°C 0.05M U M 1981KJa (26829) 192

B(PrL(hex-1,6-diol))=17.57

B(PrL(hex-1,6-diol)2)=22.05

B(PrL2(hex-1,6-diol))=23.92

Pr+++ gl NaClO4 20°C 0.0 U T H K1=6.586 B2=12.98 1980SDc (26830) 193

Extrapolated from data for I=0.10-1.0 M. Data for 35 and 45 C.

DH(K1)=-21.7 kJ mol⁻¹, DS=52 J K⁻¹ mol⁻¹; DH(K2)=-10.8, DS=85.

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

Pr+++ gl NaClO4 25°C 0.20M U K1=4.67 B2= 8.87 1996PPa (27170) 194

Pr+++ gl NaNO3 25°C 0.10M M I M K1=4.80 1995KDd (27171) 195
K(Pr(egta)+L)=3.54

Data for 0.15 and 0.05 M NaNO3. At I=0, K1=4.53, K(Pr(egta)+L)=3.83.

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

Pr+++ gl NaClO4 22°C 0.10M U 1972Mcd (27683) 196
K(PrH-1L+H)=7.90

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

Pr+++ gl NaClO4 22°C 0.10M U 1972Mcd (27745) 197
K(PrH-1L+H)=7.75

Pr+++ gl NaCl 25°C 0.10M U 1970PKe (27746) 198
K(PrH-1L+H)=7.67

C3H9N L Trimethylamine CAS 75-50-3 (803)
Trimethylamine; (CH3)3.N

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

Pr+++ nmr oth/un 30°C ? U M 1977ERc (27860) 199
Kout(Pr(EDTA)+HL)=0.68

C3H10N2 L Propanediamine CAS 109-76-2 (123)
1,3-Diaminopropane; H2N.CH2.CH2.CH2.NH2

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

Pr+++ gl KNO3 27°C 0.10M M M 1979KSc (28320) 200
K(PrL+phthalate)=6.28

K(PrL+malonate)=5.48

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

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

Pr+++ gl KNO3 25°C 0.10M C 1991SKb (28584) 201

K(PrL+H)=7.74
K(PrHL+H)=5.65

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

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

Pr+++ cal NaClO4 25°C 0.10M U H K1=2.73 B2=3.93 19760Ca (28661) 202
DH(K1)=7.9 kJ mol⁻¹, DS=79 J K⁻¹ mol⁻¹; DH(B2)=22.4, DS=119

Pr+++ gl NaClO4 25°C 0.10M C H K1=2.727 B2= 3.93 19760Cb (28662) 203
By calorimetry: DH(K1)=7.91 kJ mol⁻¹, DS(K1)=78.7 J K⁻¹ mol⁻¹.
DH(B2)=13.1, DS(B2)=119.

C4H4N2O5 H2L Thiobarbituric CAS 504-17-6 (4279)
4,6-Dihydroxy-2-mercaptopyrimidine, 2-thiobarbituric acid;

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

Pr+++ gl oth/un 25°C 0.10M U K1=3.050 1987TSb (28895) 204

C4H4N2O3 H2L Barbituric acid CAS 67-52-7 (2818)
2,4,6-Trihydroxypyrimidine; C4HN2(OH)3

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

Pr+++ gl oth/un 25°C 0.10M U T H K1=3.54 1987TSb (28918) 205
30 C:K=3.34; 35 C: 3.00. DH=-93.7 kJ mol⁻¹, DS=-247 J K⁻¹ mol⁻¹

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

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

Pr+++ gl oth/un 25°C ? U M K1=3.62 1998PAa (29121) 206
K(PrL+acac)=4.42
K(Pr(acac)L+acac)=3.89

Additional method: nmr. Medium not stated.

Pr+++ EMF NaClO4 25°C 1.00M U M K1=2.81 B2=4.47 1991WPb (29122) 207
B(PrLA)=4.74

HA=glycolic acid

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.75 1986LSb (29123) 208
K(Pr(EDTA)+L)=4.38

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.80 1985LSf (29124) 209
K(Pr(edta)+L)=4.43

Pr+++ gl NaClO4 25°C 0.10M U K1=3.63 1973CDc (29125) 210

Pr+++ gl NaClO4 25°C 1.00M U K1=2.81 B2=4.70 1973DMa (29126) 211

Pr+++ gl NaClO4 25°C 0.10M U K1=3.64 B2=5.80 1970RFa (29127) 212

C4H4O4 H2L Fumaric acid CAS 110-17-8 (289)
trans-Butenedioic acid; HOOC.CH:CH.COOH

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

Pr+++ gl NaClO4 25°C 0.10M C K1=2.61 1986LCa (29214) 213
B(PrHL)=6.07
K(Pr+HL)=1.99

Pr+++ gl NaClO4 25°C 0.10M U K1=2.84 1973CDc (29215) 214

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

Pr+++ gl NaClO4 25°C 0.50M M K1=3.36 B2=6.47 1991MOa (29279) 215

C4H5NO5 H2L (7375)
Oxalohydroxamic acid; HOOC.CO.CH2.CO.NHOH

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

Pr+++ gl KNO3 25°C 0.1M M K1=10.17 B2=19.59 1989LWa (29315) 216
K3=8.40

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

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

Pr+++ gl KCl 25°C 0.10M U K1=2.33 1995PAa (29703) 217

C4H6O2 HL Crotonic acid CAS 107-93-7 (2990)
But-2-enoic acid; CH3.CH:CH.COOH

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

Pr+++ gl NaClO4 25°C 0.20M U M K1=3.67 1986LSb (29722) 218
K(Pr(EDTA)+L)=3.22

Pr+++ gl NaClO4 25°C 0.20M U M K1=3.71 1985LSf (29723) 219
K(Pr(edta)+L)=3.27

C4H6O4 H2L Succinic acid CAS 110-15-6 (112)
1,4-Butanedioic acid; HOOC.CH2.CH2.COOH

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

Pr+++ gl NaClO4 25°C 0.10M M H K1=3.36 1986CDb (30026) 220
DH=12.8 kJ mol⁻¹, DS=107 J K⁻¹ mol⁻¹

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.11 1986LSb (30027) 221
K(Pr(EDTA)+L)=3.76

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.15 1985LSf (30028) 222
K(Pr(edta)+L)=3.81

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.11 1984LSd (30029) 223
K(Pr(edta)+L)=3.76

Pr+++ ix NaClO4 25°C 0.15M U 1968KKc (30030) 224
K(Pr+HL)=1.72
K(PrHL+HL)=1.3

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

Pr+++ gl KCl 25°C 0.20M U K1=3.78 B2=5.78 1975PLa (30135) 225

C4H6O4S H2L Thiodiacetic CAS 123-93-3 (140)
2,2'-Thiodiglycolic acid, Thiodiethanoic acid; HOOC.CH2.S.CH2.COOH

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

Pr+++ gl NaClO4 25°C 1.00M U K1=2.74 B2=4.39 1973DGa (30228) 226
B(PrHL)=5.49
B(PrHL2)=7.64

C4H6O4S H3L Thiomalic acid CAS 70-49-5 (109)
2-Mercaptosuccinic acid, 2-Sulfanyl-1,4-butanedioic acid; HOOC.CH(SH).CH2.COOH

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

Pr+++ gl NaClO4 25°C 0.20M U K1=6.07 B2=11.97 1996PJa (30354) 227

Pr+++ gl NaClO4 25°C 0.20M U K1=5.89 B2=10.56 1995PJb (30355) 228

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.45 1986LSb (30356) 229
K(Pr(EDTA)+L)=4.34

Pr+++ gl KNO3 30°C 0.10M U M 1980RTa (30357) 230
K(Pr(CDTA)+L)=3.37

Pr+++ gl KCl 30°C 0.10M U 1962CTa (30358) 231
K(Pr+HL)=3.31
K(PrHL+HL)=2.86
K(Pr(HL)2+HL)=2.59

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

Pr+++ gl KCl 25°C 0.1M U K1=4.40 2004SGa (30700) 232
K(Pr+HL)=2.30

Pr+++ gl KCl 25°C 0.10M U K1=4.46 2003SBa (30701) 233
K(Pr+HL)=2.30

Pr+++ gl NaClO4 25°C 0.20M U K1=5.04 B2= 9.56 1996PJa (30702) 234

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.20 1986LSb (30703) 235
K(Pr(EDTA)+L)=3.53

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.25 1985LSf (30704) 236
K(Pr(edta)+L)=3.66

Pr+++ gl KNO3 30°C 0.10M U M 1984AIa (30705) 237
K(Pr(EDTA)+L)=1.816

Pr+++ gl KNO3 20°C 0.10M U M 1980SDa (30706) 238
B(PrHL)=6.44

Pr+++ gl KNO3 20°C 0.10M U K1=4.41 B2=6.20 1980SDB (30707) 239
K(Pr+HL)=1.80

Pr+++ gl NaClO4 25°C 0.10M U K1=4.65 B2=7.74 1970RFa (30708) 240

Pr+++ EMF NaClO4 25°C 2.00M U K1=3.81 B2=6.33 1969JPa (30709) 241

Pr+++ EMF KCl 25°C 0.20M U K1=4.28 1964DAb (30710) 242

Pr+++ gl KCl 30°C 0.10M U K1=5.04 B2=8.44 1962CTa (30711) 243
K3=2.80

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

Pr+++ sp NaClO4 25°C 1.0M C H K1=5.32 B2=9.02 1992GRa (30915) 244
K3=2.76

Data over 35 to 95 C. DH(K1)=-1.7 kJ mol⁻¹, DS=94 J K⁻¹ mol⁻¹; DH(B2)=-3.5,
DS=63; DH(B3)=-4.6, DS=32

Pr+++ gl KCl 25°C 1.00M U K1=5.707 B2=9.686 1990TPb (30916) 245
B3=12.366

Pr+++ gl KNO3 25°C 0.10M M M K1=2.53 1989NDa (30917) 246
K(PrL+ida)=2.30
K(PrL+gly)=2.41
B(PrLA)=8.59
B(PrLB)=9.47

H2A is tartaric acid, H2B is malic acid. Also data for quaternary systems:
PrLA+ida, PrLA+gly, PrLB+ida, PrLB+gly.

Pr+++ gl KCl 25°C 1.0M U M 1988KTa (30918) 247
K(Pr(edta)+L)=2.00

Pr+++ EMF NaClO4 20°C 1.00M U T K1=5.35 B2=9.27 1972G0a (30919) 248
B3=11.82

K1(5 C)=5.42, B2=9.40, B3=11.99; K1(35 C)=5.38, B2=9.30, B3=11.83;
K1(50 C)=5.38, B2=9.26, B3=11.71

Pr+++ cal NaClO4 25°C 1.0M C H 1963GRd (30920) 249
DH(K1)=-2.85 kJ mol⁻¹, DS(K1)=92.5 J K⁻¹ mol⁻¹; DH(B2)=-7.163, DS(B2)=152;
DH(B3)=-10.46, DS(B3)=187.

Pr+++ EMF NaClO4 20°C 1.00M U K1=5.33 B2=9.23 1963GTa (30921) 250
B3=11.63

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

Pr+++ sp KCl 25°C .044M U M B2=6.9 1981KFa (31338) 251

Pr+++ gl alc/w 25°C 50% U I K1=5.47 1972SSj (31339) 252
Medium: 0-50% EtOH, 0.05 M. 50% EtOH, I=0: K1=7.15

Pr+++ EMF NaClO4 25°C 2.00M U K1=3.46 B2=5.45 1969JPa (31340) 253

Pr+++ gl KCl 24°C 0.20M U K1=3.25 1966DDa (31341) 254

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

Pr+++	gl	NaClO4	25°C	0.20M	U		K1=5.48	B2=10.48	1996PJa (31924)	255
Pr+++	gl	NaClO4	25°C	0.20M	U		K1=5.47	B2=10.47	1996PPa (31925)	256
Pr+++	gl	NaClO4	25°C	0.20M	U		K1=5.48	B2=10.48	1995PJb (31926)	257
Pr+++	gl	NaClO4	21°C	0.10M	M		K1=5.14		1987WLa (31927)	258
									B(PrHL)=12.62	
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.90		1986LSb (31928)	259
									K(Pr(EDTA)+L)=4.91	
Pr+++	gl	NaClO4	30°C	0.10M	U		K1=4.90	B2=9.44	1984YLa (31929)	260
Pr+++	gl	KCl	25°C	0.10M	U		K1=5.20	B2=8.80	1968DRb (31930)	261
Pr+++	gl	KCl	30°C	0.10M	U		K1=5.23	B2=9.07	1962CTa (31931)	262
									K3=2.72	
Pr+++	gl	KCl	25°C	0.10M	U		K1=5.4	B2=10.20	1961BLb (31932)	263

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
Pr+++	gl	KCl	25°C	1.0M	U	M			1988KTa (32339)	264
									K(Pr(edta)+L)=3.51	
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.55	B2=11.46	1988VSc (32340)	265
									K(Pr(HEDTA)+L)=4.44	
									K(Pr(CDTA)+L)=4.33	
									K(Pr(DTPA)+L)=3.80	
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.55	B2=11.46	1987VSb (32341)	266
									K(Pr(nta)+L)=5.54	
									K(Pr(edta)+L)=4.28	
Pr+++	gl	KNO3	27°C	0.10M	M	M			1984KTb (32342)	267
									K(PrA+L)=5.36	
									K(PrB+L)=5.18	
H2A=Citraconic acid, H2B=Maleic acid										
Pr+++	gl	KNO3	27°C	0.10M	U	M			1980KTb (32343)	268
									K(PrA+L)=5.88	
									K(PrB+L)=5.48	
H2A=phthalic acid, H2B=malonic acid										
Pr+++	EMF	KCl	25°C	1.0M	U	M			1977GMa (32344)	269

K(PrA+L)=3.98
 K(PrA+HL)=1.40
 K(PrA+H2L)=2.22
 K(PrA+H3L)=3.04

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

Pr+++ gl NaClO4 25°C 1.00M U K1=6.07 B2=10.67 1972GGa (32345) 270
 B3=13.77
 B(PrHL)=10.74
 B(PrH2L)=12.87

Pr+++ cal KNO3 20°C 0.10M U HM 1971GKb (32346) 271
 K(PrA+L)=3.48
 DH(PrA+L)=-12.76 kJ mol⁻¹, DS=23.0 J K⁻¹ mol⁻¹. DH(PrAL)=-26.15, DS=291.
 H4A=EDTA

Pr+++ gl KNO3 25°C 0.10M U M K1=6.44 B2=11.22 1962THa (32347) 272
 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
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Pr+++ gl diox/w 20°C 50% U K1=7.68 B2=14.31 1971MAf (32549) 273
 Medium: 50% v/v dioxan, 0.1 M NaClO4

 C4H8N2O3 HL Asparagine CAS 70-47-3 (17)
 2-Aminobutanedioic acid 4-amide; H2N.CH(CH2.CO.NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pr+++ vlt KCl 25°C 1.0M C T K1=3.50 1990NKd (32724) 274
 Method: polarography. At 35 C, K1=3.10

Pr+++ gl NaClO4 21°C 0.10M M 1987WLa (32725) 275
 B(PrH-1L)=-6.31

Pr+++ gl NaClO4 30°C 0.10M U K1=3.69 B2=6.27 1984YLa (32726) 276

Pr+++ gl NaClO4 30°C 0.2M U K1=4.09 1977MSf (32727) 277

Pr+++ gl NaClO4 25°C 0.10M U B2=7.66 1973TSc (32728) 278

 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
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Pr+++ gl NaClO4 30°C 0.10M U T H K1=3.75 B2=6.50 1980SBb (33051) 279
K3=2.64

DH=-65.39 kJ mol⁻¹. Further data available for T=40. Alternative method:
Conductivity.

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

Pr+++ gl KCl 60°C 0.10M U K1=6.10 B2=10.08 1978NBa (33092) 280
B3=13.07

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

Pr+++ gl KNO3 30°C 0.10M U M 1984AIa (33111) 281
K(Pr(EDTA)+L)=2.902

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

Pr+++ gl NaClO4 25°C 2.00M U H K1=1.80 B2=2.91 1965CGa (33242) 282
By calorimetry: DH(K1)=12.6 kJ mol⁻¹, DS=77 J K⁻¹ mol⁻¹; DH(K2)=10.5, DS=56

Pr+++ gl NaClO4 25°C 0.50M U K1=1.92 B2=3.18 1964SPa (33243) 283

C4H8O2 HL CAS 107-92-6 (1118)
n-Butanoic acid; CH3.CH2.CH2.COOH

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

Pr+++ EMF diox/w 25°C 70% U I K1=6.92 B2=6.92 1971MSi (33347) 284
B3=9.40

Medium: 0-70% dioxan, 0.5 M NaClO4. K1(0%)=1.89, B2=2.83; K1(20%)=2.27,
B2=3.45; K1(40%)=2.74, B2(40%)=4.53; K1(60%)=3.44, B2=6.01, B3=7.93

C4H8O2S HL CAS 2935-90-2 (1147)
Methyl-3-mercaptopropionate; HS.CH2.CH2.CO2.CH3

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

Pr+++ gl KNO3 25°C 0.10M U T H K1=2.52 1975SBa (33371) 285
K(PrL+30H)=1.43

DH=-29.9 kJ mol⁻¹ and DS=-24.3 J mol⁻¹ K⁻¹.

Values available when T=35 and 45 and also via conductivity.

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
Pr+++	ix	NaClO4	20°C	0.20M	U			K1=2.67 B2=4.85 B3=5.87	1968WZa (33508)	286
Pr+++	gl	NaClO4	25°C	0.20M	U			K1=2.59 K3=1.23 K4=0.78	1964DVa (33509)	287
Pr+++	gl	NaClO4	20°C	0.10M	U			K1=2.84 B2=4.91 B3=6.21	1964PKb (33510)	288
Pr+++	gl	NaClO4	25°C	0.50M	U			K1=2.48 B2=4.12	1964SPa (33511)	289

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
Pr+++	gl	KNO3	25°C	0.10M	C			K1=2.95 K3=1.43	1975PFb (33684)	290

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
Pr+++	gl	KNO3	25°C	0.10M	U			K1=2.96 K3=1.78	1976PKb (33709)	291
Pr+++	gl	NaClO4	25°C	0.50M	U			K1=2.75 B2=4.69 B3=6.15	1964SPa (33710)	292

C4H9NO2 HL 2-Aminobutyric CAS 2835-81-6 (571)
2-Aminobutanoic acid; CH3.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KNO3	25°C	0.10M	U T			K1=4.86	1978SSb (33923)	293

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
Pr+++	gl	KNO3	25°C	0.0	M T H			K1=4.67	2003MBa (34321)	294

$$K(\text{Pr}+\text{HL}=\text{PrL}+\text{H})=-4.51$$

Extrapolated from data for $I=0.07-0.32$ M KNO_3 . $\text{DH}(\text{K1})=-72.7$ kJ mol⁻¹,
 $\text{DS}(\text{K1})=-154.6$ J K⁻¹ mol⁻¹; $\text{DH}(\text{Pr}+\text{HL})=-21.7$, $\text{DS}(\text{Pr}+\text{HL})=-159.0$.

 Pr+++ gl NaClO4 25°C 0.20M U K1=4.90 B2= 8.92 1996PPa (34322) 295

 C4H10N2O4S HL ACES CAS 7365-82-4 (7488)
 N-(2-Acetamido)-2-aminoethanesulfonic acid;

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

Pr+++ gl KNO3 25°C 0.10M C K1=3.33 2001AAb (34630) 296
 *K(PrL)=-5.58
 K(2Pr(OH)L=Pr2(OH)2L2)=9.09

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

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

Pr+++ kin oth/un 25°C U K1=1.41 1971MGb (35266) 297

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

Pr+++ EMF NaClO4 25°C 100% C H K1=5.76 B2= 9.48 2000CDa (35809) 298
 Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode.
 By calorimetry: $\text{DH}(\text{K1})=-59.7$, $\text{DH}(\text{B2})=-107.1$ kJ mol⁻¹.

Pr+++ ISE non-aq 25°C 100% C H K1=2.73 B2=5.22 1993CCb (35810) 299
 Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, $\text{DH}(\text{K1})=-40.4$
 kJ mol⁻¹, $\text{DS}=-83$; $\text{DH}(\text{B2})=-83.9$, $\text{DS}=-181$.

 C4H14N2O6P2 H2L EDDPO CAS 1733-49-9 (2435)
 1,2-Diaminoethane-N,N'-bis(methylenephosphonic) acid; (H2O3P.CH2.NH.CH2)2

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

Pr+++ gl KCl 25°C 0.10M U K(Pr+HL)=7.98
 1965DKb (35892) 300

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

Pr+++ cal NaClO4 25°C 0.10M U H K1=3.21 B2=4.45 1978COa (35947) 301

DH(K1)=3.01 kJ mol⁻¹, DS=71.5; DH(K2)=5.35, DS=41.8

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

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

Pr+++ gl diox/w 35°C 50% U K1=7.32 1984SSd (36035) 302

C5H4O3 HL CAS 488-93-7 (1166)
Furan-3-carboxylic acid; C4H3O.COOH

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

Pr+++ cal NaClO4 25°C 2.00M U H K1=1.59 1976YCa (36309) 303
DH=6.49 kJ mol⁻¹ and DS=52.30 J mol⁻¹ K-1.

C5H5N L Pyridine CAS 110-86-1 (31)
Pyridine, Azine;

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

Pr+++ cal non-aq 30°C 100% U HM 1981GMa (36667) 304

K(PrA3+L)=3.3

K(PrA3L+L)=3.0

Medium: benzene. HA=6,6,7,7,8,8,8-heptafluoro-2,2-dimethyloctane-3,5-dione

C5H5NO2 HL CAS 16867-04-2 (2316)
2,3-Dihydroxypyridine, 3-Hydroxypyridin-2(1H)-one; C5H3N(OH)2

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

Pr+++ gl diox/w 25°C 50% U K1=7.41 1970GDa (36796) 305

Medium: 50% dioxan, 0.1 M NaClO4

C5H5O3F3 HL (7056)
2-Oxa-6-trifluorohexa-3,5-dione; CH3.O.CO.CH2.CO.CF3

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

Pr+++ gl diox/w 25°C 50% M I K1=5.50 B2=10.31 1994SSa (37069) 306

K3=4.24

Medium: 50% dioxan, I=0 corr. At 35 C: K1=5.48, K2=4.78, K3=4.04

C5H6O4 H2L Citraconic acid CAS 498-23-7 (3021)
Citraconic acid; CH3.C(COOH):CH.COOH

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

Pr+++ gl NaClO4 25°C 0.20M U M K1=5.03 1986LSb (37370) 307

K(Pr(EDTA)+L)=4.18

Pr+++ gl NaClO4 25°C 0.20M U M K1=5.08 1985LSf (37371) 308
K(Pr(edta)+L)=4.20

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

Pr+++ gl KCl 25°C 0.20M U K1=3.02 1989MFa (37441) 309
K(Pr+HL)=1.91

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.09 1986LSb (37442) 310
K(Pr(EDTA)+L)=3.92

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.14 1985LSf (37443) 311
K(Pr(edta)+L)=3.97

Pr+++ sol oth/un 25°C 1.0M U K1=3.78 1984Kpf (37444) 312
in 1.0 M HCl

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

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

Pr+++ gl diox/w 20°C 50% U K1=4.07 B2=7.17 1971MAf (37531) 313
Medium: 50% v/v dioxan, 0.1 M NaClO4

C5H7NO4 HL (6083)
2-Acrylamidoglycolic acid; CH2:CH.CO.NH.CH(OH).COOH

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

Pr+++ gl NaNO3 25°C 0.50M C K1=2.81 1977DPa (37541) 314
B(PrH-1L)=-4.22
B(PrH-2L2)=-9.07
B(Pr2H-2L2)=-4.86

C5H8N2O3 H2L (4317)
Methylacetylglyoxime; CH3.C(:N.OH).C(:N.OH).CO.CH3

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

Pr+++ gl diox/w 20°C 50% U K1=5.17 B2=9.36 1971MAf (37708) 315

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
Pr+++	gl	KCl	25°C	0.10M	U		K1=5.22 K3=2.98	1995PAa (38058)	316
Pr+++	gl	diox/w	30°C	75%	U		K1=6.86 K3=4.61	1979MBc (38059)	317
Pr+++	gl	NaClO4	20°C	0.10M	U	M		1973TZa (38060)	318
							K(Pr(EDTA)+L)=3.50		
Pr+++	gl	R4N.X	25°C	0.10M	U	M		1972FGa (38061)	319
							K(Pr(EDTA)+L)=2.56		
Pr+++	gl	alc/w	?	50%	U	I	K1=6.47	1971KOa (38062)	320
		Medium: 5-80% MeOH, 0.005 PrCl3,					K1(5%)=5.40, K1(80%)=7.58		
Pr+++	gl	mixed	30°C	67%	U		K1=6.85 K3=4.61	1964DBb (38063)	321
		Medium: 67% acetone, 0.1 M NaClO4							
Pr+++	gl	NaClO4	25°C	2.0M	U		K1=5.01	1964YCa (38064)	322
Pr+++	gl	oth/un	30°C	0.10M	U		K1=5.27 K3=3.2	1960GFa (38065)	323
Pr+++	gl	mixed	?	75%	U		K1=6.91 K3=4.51	1957DBb (38066)	324
		Medium: acetone							
Pr+++	gl	oth/un	30°C	0.0	U		K1=5.4 K3=3.0	1955IFa (38067)	325
Pr+++	gl	diox/w	25°C	50%	U		K1=8.71	1949MMA (38068)	326
		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
Pr+++	gl	KCl	25°C	0.20M	U		K1=3.86	1989ZPa (38248)	327
		In 70.4% v/v EtOH/H2O: K1 = 6.09							
		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
Pr+++	gl	NaClO4	25°C	0.10M	U		K1=3.21	1970RFa (38267)	328

C5H8O4 H2L Glutaric acid CAS 110-94-1 (420)
Pentanedioic acid; HOOC.CH2.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaClO4	25°C	0.10M	M	H		K1=3.17	1986CDb (38346)	329
DH=14.4 kJ mol ⁻¹ , DS=109 J K ⁻¹ mol ⁻¹										
Pr+++	gl	NaClO4	25°C	0.20M	U		M	K1=4.02 K(Pr(EDTA)+L)=3.22	1986LSb (38347)	330
Pr+++	gl	NaClO4	25°C	0.20M	U		M	K1=4.06 K(Pr(edta)+L)=3.27	1985LSf (38348)	331
Pr+++	gl	NaClO4	25°C	0.20M	U		M	K1=4.02 K(Pr(edta)+L)=3.22	1984LSd (38349)	332

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
Pr+++	gl	KCl	24°C	0.20M	U			K1=3.53	1966DDa (38435)	333

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
Pr+++	gl	NaClO4	25°C	0.10M	U	T H		K1=5.22	1984SGb (38638)	334
35 C: K1=5.09; 45 C: 4.95. DH=-22.9 kJ mol ⁻¹ , DS=22.8 J K ⁻¹ mol ⁻¹										

Pr+++	gl	NaClO4	25°C	0.10M	U			B2=5.10	1981ZLa (38639)	335
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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
Pr+++	gl	NaCl	37°C	0.15M	U			K1=3.86	1997GMa (38748)	336

Pr+++	gl	NaClO4	25°C	0.10M	U			B2=4.55	1981ZLa (38749)	337
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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
Pr+++	gl	NaCl	37°C	0.15M	U			K1=3.85 B(CeHL)=11.05	1991DWb (39119)	338

Pr+++ vlt KCl 25°C 1.0M C T H K1=4.00 1983KMb (39120) 339
Method: polarography. Also data for 35 C. DH(K1)=-33.6 kJ mol⁻¹,
DS(K1)=-35.2 J K⁻¹ mol⁻¹.

Pr+++ gl KCl 30°C 0.10M U T H K1=3.855 1978AGb (39121) 340
Data for 40 C. DH and DS values reported.

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

Pr+++ gl KCl 25°C 0.10M U K1=6.47 B2=11.53 1980MGc (39278) 341
B3=14.99
B(Pr+20H+L)=17.05

C5H10N2O3 HL Glutamine CAS 56-85-9 (18)
2-Aminopentanedioic acid 5-amide; H₂N.CH(CH₂.CH₂.CO.NH₂).COOH

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

Pr+++ vlt KCl 25°C 1.0M C T K1=3.45 1990NKd (39834) 342
Method: polarography. At 35 C, K1=2.60

Pr+++ gl NaClO₄ 30°C 0.2M U K1=4.28 1977MSf (39835) 343

Pr+++ gl NaClO₄ 25°C 0.10M U B2=7.51 1973TSb (39836) 344

C5H10N2O5 H2L (8080)
3-Hydroxy-2,4-diaminopentane-1,5-dioic acid;

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

Pr+++ gl KCl 20°C 0.1M U K1=5.85 1977ABf (40120) 345

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

Pr+++ gl KNO₃ 25°C 0.10M U K1=2.54 B2=4.31 1969PCa (40261) 346
K3=1.11

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

Pr+++ gl NaClO₄ 25°C 1.0M U K1=2.24 1968GCa (40285) 347

 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

 Pr+++ gl NaClO4 25°C 0.10M U K1=2.30 B2=3.89 1970RDa (40302) 348
 K3=1.36

 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

 Pr+++ gl KNO3 25°C 0.10M C K1=2.96 B2=5.11 1975PFb (40317) 349
 K3=1.32

 C5H10O5 L D-Ribose CAS 50-69-1 (512)
 D-Ribose;

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

 Pr+++ cal none 25°C 0.0 U H K1=0.86 1993MLa (40353) 350
 DH(K1)=-11.6 kJ mol⁻¹, TDS=-6.7

 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

 Pr+++ gl NaClO4 25°C 0.20M U K1=5.60 B2=10.91 1996PPa (40745) 351

 Pr+++ gl KNO3 25°C 0.20M U M K1=6.12 1990LSb (40746) 352
 K(Pr(phen)+L)=5.95

 Pr+++ gl NaClO4 25°C 0.20M U M K1=6.28 1986LSb (40747) 353
 K(Pr(EDTA)+L)=5.45

 Pr+++ gl NaClO4 25°C 0.20M U M K1=6.28 1985LSe (40748) 354
 K(Pr(edta)+L)=5.45.

 Pr+++ gl KCl 25°C 0.10M U T K1=3.92 1974BFa (40749) 355

 C5H11NO2 HL Nor-Valine CAS 760-78-1 (689)
 2-Aminopentanoic acid; CH3.CH2.CH2.CH(NH2).COOH

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

 Pr+++ gl KNO3 27°C 0.10M M TI K1=5.62 1996ALa (40845) 356
 For I = 0.05, K1=5.74; I=0.15, K1=5.41. Also data for 32 and 37 C.

C5H11NO2S HL Methionine CAS 63-68-3 (42)
2-Amino-4-(methylthio)butanoic acid; H2N.CH(CH2.CH2.S.CH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaClO4	25°C	0.20M	U			K1=4.81 B2= 9.28	1996PPa (41119)	357

Pr+++	gl	NaNO3	25°C	0.10M	M	I M		K1=4.88	1995KDd (41120)	358
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Data for 0.15 and 0.05 M NaNO3. At I=0, K1=5.08, K(Pr(egta)+L)=3.84.

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
Pr+++	gl	KCl	25°C	0.10M	U			K1=6.48 B(PrHL)=13.23	1996ADa (41192)	359

C5H12O5 L Xylitol CAS 87-99-0 (2139)
Xylitol; HO.CH2.HCOH.HOCH.HCOH.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	nmr	oth/un	39°C			? U		K1eff=0.30 K2eff=-0.06	1977REa (41691)	360

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
Pr+++	gl	KNO3	25°C	0.20M	U	M		K1=4.27	1987LSc (42585)	361

K(Pr(nta)+L)=3.95, K(Pr(edta)+L)=3.84.

Pr+++	gl	NaClO4	25°C	0.20M	U	T M		K1=3.94 B2= 7.07 K3=2.67	1978MMk (42586)	362
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Data for 35 and 45 C. H3A is N-hydroxyethylenediaminetriethanoic acid.

Pr+++	gl	NaClO4	25°C	0.50M	U			K1=3.46 B2=6.44 B3=8.76	1977GGb (42587)	363
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Pr+++	gl	KNO3	25°C	0.10M	U			K1=3.83 B2=7.13 K3=2.65 K4=2.00	1968PIa (42588)	364
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Pr+++ gl NaClO4 25°C 2.0M U K1=3.62 B2=6.25 1965YCa (42589) 365

Pr+++ gl oth/un 25°C 0.50M U I K1=3.43 B2=6.65 1964MTa (42590) 366
B3=8.94

I=0.02:K1=4.38, B2=7.90, B3=11.00

Pr+++ gl KNO3 25°C 0.10M U K1=3.85 B2=6.96 1964THb (42591) 367
B3=9.9

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

Pr+++ gl NaClO4 25°C 0.20M U K1=2.01 1973FDa (42683) 368

C6H5NO3 H2L CAS 874-24-8 (4356)
3-Hydroxypyridine-2-carboxylic acid; C5H3N.(OH)(COOH)

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

Pr+++ gl NaClO4 30°C 0.10M U 1969DNc (42753) 369

K(Pr+HL)=3.28
K(PrHL+HL)=3.22

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

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

Pr+++ gl R4N.X 25°C 0.10M C K1=1.30 1990CBe (42814) 370

C6H5NO3 HHL CAS 824-40-8 (878)
Pyridine-2-carboxylic acid N-oxide (Picolinic acid N-oxide); C5H4N(O)COO

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

Pr+++ gl NaClO4 25°C 2.0M U K1=2.75 B2=5.01 1965YCa (42839) 371

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

Pr+++ gl NaNO3 25°C 0.0 U M K1=9.40 1996KDb (42939) 372

K(Pr(egta)+L)=5.44

Extrapolated from data for I=0.05-0.15 M NaNO3.

Pr+++ gl KNO3 25°C 0.10M U K1=8.46 B2=14.35 1981BDa (42940) 373

 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
Pr+++	sp	KCl	25°C	0.10M	M	I	K1=6.03	1989PEa (42958)	374

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
Pr+++	sp	KCl	25°C	0.10M	U		K1=5.02	1987PLa (43114)	375

C6H5O4Cl HL Chlorokojic aci (3086)
 3-Chloro-5-hydroxy-2-hydroxymethyl-4-pyrone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	oth/un	30°C	0.10M	U		K1=5.70 B2=10.52	1972DSd (43136)	376

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
Pr+++	sp	KCl	25°C	0.10M	U		K1=5.05	1987PLa (43156)	377

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
Pr+++	gl	NaNO3	25°C	0.0	U	M	K1=9.56 K(Pr(egta)+L)=5.59	1996KDb (43808)	378

Extrapolated from data for I=0.05-0.15 M NaNO3.

Pr+++	gl	NaClO4	25°C	0.20M	U		K1=9.48	1996PJa (43809)	379
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Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=8.90 K(Pr(EDTA)+L)=6.70	1986LSb (43810)	380
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Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=8.92 K(Pr(edta)+L)=6.81	1985LSf (43811)	381
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Pr+++	gl	NaClO4	28°C	0.20M	U	M	K1=8.90 K(Pr(edta)+L)=6.70	1982LSa (43812)	382
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Pr+++	gl	KNO3	25°C	0.05M	M	I	K1=9.65 B2=18.39	1981BDc (43813)	383
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Also data for I=0.2 and 0.35 M. At I=0, K1=10.20, K2=9.25.

 Pr+++ gl NaClO4 25°C 0.10M U T K1=10.01 B2=18.80 1979NDa (43814) 384
 At 45 C, K1=8.96, K2=8.14. Medium ionic strength not stated.

Pr+++ gl NaClO4 30°C 0.20M U M K1=8.63 1978MSe (43815) 385
 K(PrL+NTA)=6.34
 K(PrL+HEDTA)=5.27
 K(PrL+EDTA)=4.88

Pr+++ gl NaClO4 25°C 0.20M U T H K1=8.72 1976MMb (43816) 386
 K(PrA+L)=3.40
 DH(K1)=-10.2 kJ mol⁻¹, DH(PrA+L)=-9. H4A=EDTA

Pr+++ EMF NaCl 25°C 0.10M U K1=10.31 1969PKe (43817) 387

 C6H6O2 H2L Resorcinol CAS 108-46-3 (3645)
 1,3-Dihydroxybenzene; HO.C6H4.OH

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

Pr+++ gl NaClO4 25°C 0.20M U M K1=5.05 1986LSb (43884) 388
 K(Pr(EDTA)+L)=2.35

Pr+++ gl NaClO4 25°C 0.20M U M K1=5.10 1985LSf (43885) 389
 K(Pr(edta)+L)=2.39

Pr+++ gl NaClO4 28°C 0.20M U M K1=5.05 1982LSa (43886) 390
 K(Pr(edta)+L)=2.35

 C6H6O3 H3L Pyrogallol CAS 87-66-1 (696)
 1,2,3-Trihydroxybenzene; C6H3(OH)3

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

Pr+++ gl NaClO4 25°C 0.20M U K1=9.75 1996PJa (43974) 391

Pr+++ gl NaClO4 30°C 0.20M U M K1=9.99 1978MSk (43975) 392
 K(Pr(nta)+L)=5.76

Pr+++ gl NaClO4 25°C 0.20M U T H K1=9.78 1976MMb (43976) 393
 K(PrA+L)=4.27
 DH(K1)=-5.7 kJ mol⁻¹, DH(PrA+L)=7.6. H4A=EDTA

C6H6O3 H3L Phloroglucinol CAS 6099-90-7 (2525)
 1,3,5-Trihydroxybenzene; C6H3(OH)3

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

Pr+++ gl NaClO4 25°C 0.20M U M K1=3.90 1986LSb (44021) 394

K(Pr(EDTA)+L)=2.51

Pr+++ gl NaClO4 25°C 0.20M U M K1=3.94 1985LSf (44022) 395
K(Pr(edta)+L)=2.53

Pr+++ gl NaClO4 28°C 0.20M U M K1=3.90 1982LSa (44023) 396
K(Pr(edta)+L)=2.50

C6H6O3 HL Maltol CAS 118-71-8 (2442)
3-Hydroxy-2-methyl-4H-pyran-4-one;

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

Pr+++ gl NaClO4 30°C 0.10M U M K1=5.59 B2=10.06 1989NOB (44098) 397
B(PrLA)=12.26
K(PrA+L)=5.82
K(PrB+L)=5.24
K(PrC+L)=4.36

H2A=iminodiacetic acid, H2B=hydroxyethyliminodiethanoic acid, H3C=nitrilo-
triethanoic acid

Pr+++ gl NaClO4 30°C 0.10M U K1=6.13 B2=10.96 1970DSc (44099) 398
K3=3.55

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

Pr+++ gl NaClO4 30°C 0.10M U M K1=5.15 B2=9.65 1989NOB (44237) 399
B(PrLA)=11.91
K(PrA+L)=5.47
K(PrB+L)=4.56
K(PrC+L)=4.19

H2A=iminodiacetic acid, H2B=hydroxyethyliminodiethanoic acid, H3C=nitrilo-
triethanoic acid

Pr+++ sp KCl 25°C 0.10M C I K1=5.658 1987PEa (44238) 400
In 0.086 M KCl, K1=5.692.

Pr+++ gl oth/un 30°C 0.10M U K1=5.77 B2=10.54 1972DSd (44239) 401
K3=3.89

Pr+++ gl NaClO4 25°C 2.0M U K1=5.18 B2=9.76 1964YCa (44240) 402

C6H6O6 H3L cis-Aconitic CAS 585-84-2 (3064)
cis-1,2,3-Propenetricarboxylic acid, cis-Aconitic acid; HOOC.CH:C(COOH)CH2.COOH

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

Pr+++ gl NaCl 20°C 0.10M U K1=4.68 1986SKb (44300) 403
K(Pr+HL)=3.28

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

Pr+++ gl KNO3 25°C 0.10M U TIH K1=13.98 B2=26.83 1980BDd (44482) 404
Data for I=0.05-0.2 M and for I=0.10 M (35 C). Also DH and DS values.

Pr+++ gl NaClO4 25°C 0.50M C K1=11.8 B2=19.6 1976LAb (44483) 405
B(PrHL2)=28.0

Pr+++ gl NaClO4 25°C 0.10M U K1=13.47 1970SSi (44484) 406

C6H7N L Picoline CAS 109-06-8 (320)
2-Methylpyridine; C5H4N.CH3

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

Pr+++ cal non-aq 30°C 100% U HM 1981GMa (44613) 407
K(PrA3+L)=3.0
K(PrA3L+L)=2.0

Medium: benzene. HA=6,6,7,7,8,8,8-heptafluoro-2,2-dimethyloctane-3,5-dione

C6H7N L beta-Picoline CAS 108-99-6 (324)
3-Methylpyridine; C5H4N.CH3

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

Pr+++ cal non-aq 30°C 100% U HM 1981GMa (44705) 408
K(PrA3+L)=4.0
K(PrA3L+L)=3.0

Medium: benzene. HA=6,6,7,7,8,8,8-heptafluoro-2,2-dimethyloctane-3,5-dione

C6H7N L gamma-Picoline CAS 108-89-4 (325)
4-Methylpyridine; C5H4N.CH3

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

Pr+++ cal non-aq 30°C 100% U HM 1981GMa (44831) 409
K(PrA3+L)=4.3
K(PrA3L+L)=3.0

Medium: benzene. HA=6,6,7,7,8,8,8-heptafluoro-2,2-dimethyloctane-3,5-dione

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

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

Pr+++ sp non-aq 25°C 100% U HM 1982KNa (44877) 410
K(PrA3+L)=2.33

Medium: CCl4. HA=dipivaloylmethane

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

Pr+++ gl NaClO4 15°C 0.10M U K1=8.85 1980ZMa (45130) 411

C6H7O3F3 HL (7057)

3-Oxa-7-trifluorohepta-4,6-dione; CH3CH2.O.CO.CH2.CO.CF3

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

Pr+++ gl diox/w 25°C 50% M I K1=5.56 B2=10.71 1994SSa (45190) 412
K3=4.31

Medium: 50% dioxan, I=0 corr. At 35 C: K1=5.37, K2=5.02, K3=4.22

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

Pr+++ gl KCl 25°C 0.20M U K1=4.17 1989ZPa (45473) 413

In 70.4% v/v EtOH/H2O: K1 = 5.39

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

Pr+++ gl NaClO4 25°C 2.00M U IH 1988HSa (45652) 414
K(Pr+HL)=1.48

DH=3.4 kJ mol⁻¹, DS=39.7 J K⁻¹ mol⁻¹

In 0.1 M NaClO4: K=1.6, DH=3.2 kJ mol⁻¹, DS=41 J K⁻¹ mol⁻¹

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

Pr+++ gl NaClO4 25°C 0.10M U TIH K1=4.92 B2=8.49 1986AJc (45708) 415
DH(K1)=-5.0 kJ mol⁻¹, DS=77.3 J K⁻¹ mol⁻¹; DH(K2)=-5.3, DS=51.0

Pr+++ gl NaClO4 30°C 0.10M U IH K1=4.92 B2=8.49 1983ASa (45709) 416
DH(K1)=-4.9 kJ mol⁻¹, DH(K2)=5.3

Pr+++ gl KNO3 25°C 0.05M M K1=4.15 1975DPb (45710) 417

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

Pr+++ gl KNO3 25°C 0.10M U M 1975TDa (46234) 418
B(Pr(IDA)L)=10.7

Pr+++ dis NaClO4 25°C 0.15M U 1973HHc (46235) 419
K(Pr+HL+L)=10.74

Pr+++ gl alc/w 25°C 25% U I K1=8.68 1972BKd (46236) 420
Medium: EtOH/H2O, 0.05 M (NaCl,NaClO4). 0%, K1=7.95, 50%, K1=9.47

Pr+++ sol oth/un 25°C 0.0 U I K1=8.72 B2=12.60 1965SKc (46237) 421
Kso=-12.34
At I=0.1: K1=7.4, B2=11.2, Kso=-10.98

Pr+++ ix oth/un 25°C 0.14M U 1947TMa (46238) 422
K(Pr+H2L)=3.4

Pr+++ ix oth/un 7°C 0.16M U T 1930CCa (46239) 423
K(Pr+H2L)=2.0

37 C: K=1.9

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

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

Pr+++ EMF NaClO4 25°C 1.00M U K1=5.80 B2=9.49 1991WPb (46334) 424

C6H9NO6 H3L NTA CAS 139-13-9 (191)
Nitrilotriethanoic acid; N(CH2.COOH)3

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

Pr+++ ISE NaClO4 25°C 0.10M C I K1=10.87 1997LBb (46985) 425
Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M.
At I=0.0 M, K1=12.70.

Pr+++ gl alc/w 30°C 50% C K1=10.28 1994SOa (46986) 426
Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4.

Pr+++ cal KNO3 25°C 0.10M U T H 1984MPc (46987) 427
DH(K1)=-2.72 kJ mol⁻¹, DH(B2)=-17.50. At 40 C DH(K1)= -0.54
DH(B2)=-13.50

Pr+++ ISE KNO3 25°C 0.10M C K1=11.07 1980NSf (46988) 428
Competitive method using Cd ion-selective electrode.

Pr+++ gl KNO3 20°C 1.0M C K2=7.66 1978GHb (46989) 429

Pr+++ gl diox/w 30°C 50% U M K(PrL+A)=4.76 1978SGf (46990) 430

HA=tropolone

Pr+++ gl NaClO4 25°C 0.50M U K1=10.31 1977GGb (46991) 431

Pr+++ EMF KCl 25°C 1.0M U M K(PrA+L)=5.53 1977GMa (46992) 432
K(PrA+H2L)=2.54
K(PrA+H3L)=2.73
K(PrA+H4L)=4.45

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

Pr+++ gl KNO3 20°C 0.10M U M K(PrL+Citrate)=3.6 1974TDa (46993) 433

Pr+++ cal KNO3 20°C 0.10M U HM K(PrA+L)=4.67 1971GKb (46994) 434

H4A=EDTA. DH(PrA+L)=-19.46 kJ mol⁻¹, DS=23.0 J K⁻¹ mol⁻¹.
DH(PrAL)=-32.8 kJ mol⁻¹, DS=292 J K⁻¹ mol⁻¹

Pr+++ gl oth/un 20°C 0.20M U M B(PrL(OH))=5.99 1970VMa (46995) 435

Pr+++ gl KCl 20°C 0.10M U K1=10.88 B2=19.06 1965ANb (46996) 436

Pr+++ gl KNO3 25°C 0.10M U T H T K1=11.07 B2=19.25 1962MFb (46997) 437
15 C: K1=11.11, K2=8.31; 20 C: 11.07, 8.22; 30 C: 11.12, 8.15; 35 C: 11.08, 8.10; 40 C: 11.11, 8.06. DH(K1)=1.9 kJ mol⁻¹, DS=218; DH(K2)=-15.6, DS=104

Pr+++ sp oth/un 19°C 0.02M U K1=10.28 B2=19.25 1961AVa (46998) 438

Pr+++ vlt KNO3 20°C 0.10M U K(Pr2L3)=36.2 1957NOa (46999) 439

Pr+++ vlt KNO3 20°C 0.10M U T K1=10.88 1956SGa (47000) 440

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

Pr+++ gl KNO3 35°C 0.10M U K(Pr+HL)=3.56 1987RRc (47604) 441

Pr+++ gl KNO3 35°C 0.10M U M 1986RMb (47605) 442
K(Pr+HL)=3.56
K(Pr+HL+cytidine)=8.50

Pr+++ gl NaClO4 37°C 3.00M U T K1=3.69 B2=7.78 1971JWa (47606) 443
B(PrHL)=11.04

Pr+++ gl NaClO4 25°C 3.00M U T K1=4.36 B2=6.20 1970JWa (47607) 444
B(PrHL)=11.77

C6H1002 HL CAS 3002-24-2 (2742)
2,4-Hexanedione; CH3.CO.CH2.CO.CH2.CH3

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

Pr+++ gl mixed 30°C 67% U K1=6.72 B2=12.56 1964DBb (47933) 445
K3=5.38
Medium: 67% acetone, 0.1 M NaClO4

C6H1002S HL (4370)
Ethyl thioacetoacetate; CH3.CS.CH2.CO.OCH2.CH3

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

Pr+++ gl mixed 30°C 75% U K1=7.00 B2=12.60 1970DRa (47966) 446
K3=5.00
Medium: 75% acetone, 0.1 M

C6H1003 HL CAS 16841-19-3 (3649)
1-Hydroxycyclopentanecarboxylic acid; HO.C5H8.COOH

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

Pr+++ gl NaClO4 25°C 0.10M U K1=2.604 B2=4.53 1966PRb (47995) 447
K3=1.18

C6H1003 HL CAS 141-97-9 (3068)
Ethyl acetoacetate; CH3.CO.CH2.CO2.C2H5

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

Pr+++ gl mixed 30°C 75% U K1=5.88 B2=11.10 1969DRa (48017) 448
Medium: 75% acetone, 0.1 M NaClO4

C6H1004 H2L Adipic acid CAS 124-04-9 (401)
1,6-Hexanedioic acid; HOOC.(CH2)4.COOH

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

Pr+++ gl NaClO4 25°C 0.10M M H K1=3.09 1986CDb (48084) 449
DH=15.8 kJ mol⁻¹, DS=112 J K⁻¹ mol⁻¹

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

Pr+++ oth NaClO4 25°C 0.10M U K1=4.89 1984AFa (48348) 450
Laser excitation spectroscopy, competition method.

Pr+++ gl NaClO4 25°C 1.00M C H K1=4.81 B2=7.89 1974GGa (48349) 451
B3=8.59
B(PrHL2)=9.54

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

Pr+++ gl NaClO4 25°C 0.10M U M K1=4.49 1997PPb (48486) 452
K(Pr(edta)+L)=4.01

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

Pr+++ gl alc/w 30°C 50% C K1=8.67 1994SOa (48782) 453
Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4.

Pr+++ gl KNO3 20°C 1.00M U K1=8.02 B2=14.65 1974CMD (48783) 454
K(PrL2(OH)+H)=10.52

Pr+++ oth NaNO3 20°C 0.10M U M K1=8.55 B2=15.45 1966JMc (48784) 455
Method: paper electrophoresis. Ternary complexes with HEDTA

Pr+++ vlt KCl 25°C 0.10M U B2=14.45 1965DTa (48785) 456

Pr+++ gl KNO3 25°C 0.10M U K1=8.64 B2=15.50 1963TLa (48786) 457

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

Pr+++ gl R4N.X 25°C 0.10M C K1=7.84 1988CCb (49265) 458

Pr+++ gl KNO3 25°C 0.10M U K1=7.84 B2=13.07 1962THb (49266) 459

C6H1203 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
Pr+++	EMF	NaCl04	25°C	1.0M	U			K1=2.31 K3=1.02 K4=0.57	1965TVa (49465)	460

Method: quinhydrone electrode

C6H1203 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
Pr+++	EMF	NaCl04	25°C	1.0M	U			K1=2.25 K3=1.00 K4=0.82	1965TVa (49476)	461

Method: quinhydrone electrode

C6H1204 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
Pr+++	gl	KNO3	25°C	0.10M	U			K1=3.23 K3=1.11	1979PPa (49498)	462

C6H1207 HL Galactonic acid (6942)
2R,3S,4S,5R,6-Pentahydroxo-hexanoic acid, D-Galactonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaCl04	25°C	0.10M	U			K1=2.60 B(PrH-1L)=-3.47 B(PrH-2L)=-10.19 B(PrH-1L2)=-0.56	2000GBa (49646)	463

C6H1207 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
Pr+++	gl	NaCl04	25°C	0.10M	U			K1=2.78 B(PrH-1L)=-3.34 B(PrH-2L)=-10.09 B(PrH-1L2)=-0.67 B(PrH-3L2)=-19.13	2000GBa (49751)	464

Pr+++	gl	NaCl04	25°C	0.20M	U	M		K1=3.26	1986LSb (49752)	465
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K(Pr(EDTA)+L)=2.69

Pr+++ gl NaClO4 25°C 0.20M U M K1=3.29 1985LSf (49753) 466
K(Pr(edta)+L)=2.74

Pr+++ EMF alc/w 25°C 95% U I K1=7.2 1966KRb (49754) 467
Medium: 90% MeOH. K1=4.71(50%), 5.45(80%), 6.49(90%)

Pr+++ gl KCl 25°C 0.20M U K1=2.55 B2=4.55 1963K0c (49755) 468

C6H12O7 HL Gulonic acid CAS 526-97-6 (7555)
Gulonic acid, xylosecarboxylic acid;HOCH2(CHOH)4COOH

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

Pr+++ gl NaClO4 25°C 0.10M U K1=2.67 B2= 5.32 2000GBa (49778) 469
B(PrH-1L)=-3.21
B(PrH-2L)=-9.80
B(Pr2H-3L2)=-10.5
B(Pr2H-5L2)=-26.76

D-isomer

C6H13NO2 HL Isoleucine CAS 73-32-5 (424)
2-Amino-3-methylpentanoic acid; CH3.CH2.CH(CH3).CH(NH2).COOH

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

Pr+++ gl NaNO3 25°C 0.10M M M K1=5.55 1996KDd (49912) 470
*K(PrL)=-8.42
*K(Pr(OH)L)=-8.86
K(Pr(egta)+L)=3.73

Data for 0.05-0.15 M NaNO3. At I=0, K1=5.73, K(Pr(egta)+L)=3.83.

Pr+++ gl NaClO4 25°C 0.20M U K1=4.92 B2= 8.98 1987PPa (49913) 471

C6H13NO2 HL Leucine CAS 61-90-5 (47)
2-Amino-4-methylpentanoic acid; H2N.CH(CH2.CH(CH3)2)COOH

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

Pr+++ gl NaNO3 25°C 0.10M M M K1=5.52 1996KDd (50098) 472
*K(PrL)=-8.44
*K(Pr(OH)L)=-8.88
K(Pr(egta)+L)=3.71

Data for 0.05-0.15 M NaNO3. At I=0, K1=5.72, K(Pr(egta)+L)=3.84.

Pr+++ gl KNO3 25°C 0.20M U M K1=5.75 1990LSb (50099) 473
K(Pr(phen)+L)=5.55

Pr+++ gl NaClO4 25°C 0.20M U K1=5.25 B2= 9.48 1987PPa (50100) 474

Pr+++ gl NaClO4 25°C 0.20M U M K1=5.99 1986LSb (50101) 475
K(Pr(EDTA)+L)=4.72

Pr+++ gl NaClO4 25°C 0.20M U M K1=5.99 1985LSe (50102) 476
K(Pr(edta)+L)=4.72.

C6H13NO2 HL Norleucine CAS 616-06-8 (602)
2-Aminoheptanoic acid (2-Aminocaproic acid) CH3.(CH2)3.CH(NH2).COOH

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

Pr+++ gl NaNO3 25°C 0.10M M M K1=5.48 1996KDD (50190) 477
*K(PrL)=-8.49
*K(Pr(OH)L)=-8.91
K(Pr(egta)+L)=3.69

Data for 0.05-0.15 M NaNO3. At I=0, K1=5.70, K(Pr(egta)+L)=3.83.

Pr+++ gl NaClO4 22°C 0.10M M M K1=4.78 B2=9.41 1991DTa (50191) 478
B3=13.01
K(PrA+L)=9.32

H4A=trans-cyclohexane-1,2-diaminotetraethanoic acid. Definitions wrong?

C6H13NO2 HL CAS 60-32-2 (1846)
6-Aminoheptanoic acid; H2N.CH2.CH2.CH2.CH2.CH2.COOH

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

Pr+++ gl KCl 20°C 0.20M U K1=4.80 B2=9.38 1990PLa (50220) 479

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

Pr+++ gl KNO3 20°C 0.10M U K1=5.46 B2=9.41 1982RFa (50398) 480

Pr+++ gl NaClO4 20°C 0.10M U T K1=5.98 B2=10.00 1981SGd (50399) 481

Data for 20-40 C. At 30 C: K1=5.84, K2=3.62

Pr+++ gl alc/w 20°C 50% U I K1=6.57 1970KRa (50400) 482
Medium: 0-80% MeOH, 0.03 M KCl. K1(0%)=5.44, K1(20%)=5.98, K1(80%)=7.7

Pr+++ oth NaNO3 20°C 0.10M U K1=7.7 B2=13.20 1966JMc (50401) 483

Method: paper electrophoresis

C6H13NO4S HL MES CAS 4432-31-9 (7807)
4-Morpholineethanesulfonic acid;

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

Pr+++ gl KNO3 25°C 0.10M C K1=3.39 2001AAb (50433) 484
*K(PrL)=-7.00
K(2Pr(OH)L=Pr2(OH)2L2)=9.28

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

Pr+++ gl NaCl 37°C 0.15M U M K1=3.23 1997GMa (50586) 485
B(PrHL)=9.67
B(PrH2AL)=25.10

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

C6H14N2O2 HL Lysine CAS 56-87-1 (41)
2,6-Diaminohexanoic acid; H2N.(CH2)4.CH(NH2)COOH

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

Pr+++ gl NaClO4 20°C 0.10M U T H K1=7.37 B2=13.93 1983SDa (50832) 486
30 C: K1=7.12, K2=6.38, 40 C: K1=6.71, K2=5.92

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

Pr+++ ISE non-aq 25°C 100% C H K1=4.35 B2=5.06 1993CCb (52208) 487
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-56.9
kJ mol⁻¹, DS=-108; DH(B2)=-89, DS=-202.

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

Pr+++ gl KNO3 25°C 0.10M C K1=7.17 1991SKb (52356) 488
K(PrHL+H)=6.88

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

Pr+++ gl NaNO3 25°C 0.10M U I M K1=5.13 1996KDC (52497) 489
*K(PrL)=-7.48
K(Pr(egta)+L)=4.76

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=5.53, *K(PrL)=-7.68,

K(Pr(egta)+L)=5.08.

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.94 1978MMj (52498) 490
K(Pr(enta)+L)=3.46
K(PrA+L)=3.34
K(Pr(edta)+L)=3.18

A is N-hydroxyethylenediamine-N,N',N'-triethanoic acid.

Pr+++ gl oth/un 24°C 0.20M U K1=4.95 1972PSd (52499) 491
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

Pr+++ cal NaClO4 25°C 0.50M C H 1963GRd (52800) 492
DH(K1)=-16.37 kJ mol⁻¹, DS(K1)=109 J K⁻¹ mol⁻¹; DH(B2)=-32.92,
DS(B2)=177; DH(B3)=-47.57, DS(B3)=219.

Pr+++ EMF oth/un 20°C 0.50M U K1=8.63 B2=15.10 1961GRa (52801) 493
K3=4.84

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

Pr+++ gl NaClO4 25°C 0.10M C H K1=1.64 1986CLc (52871) 494
DH=6.5 kJ mol⁻¹, DS=53 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

Pr+++ gl NaClO4 25°C 0.10M C H K1=1.78 1986CLc (53240) 495
DH=5.5 kJ mol⁻¹, DS=52 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

Pr+++ gl NaClO4 25°C 0.10M C H K1=2.02 1986CLc (53260) 496
DH(K1)=7.6 kJ mol⁻¹, DS=64 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

 Pr+++ gl NaClO4 25°C 0.10M C H T 1993ALa (53374) 497
 B(1,1,1)=12.34
 B(1,0,1)=6.84
 B(1,0,2)=11.70
 B(1,-1,1)=-1.75

B(p,q,r); pPr+qH+rL=(Pr)pHqLr. B(1,-2,1)=-10.31.

C7H6OS HL Thiotropolone CAS 1073-38-7 (8477)
 2-Mercapto-2,4,6-cycloheptatrien-1-one;

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

Pr+++ gl diox/w 30°C 50% M I K1=4.92 B2= 9.55 1978SSi (53547) 498
 Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4. Data for 0.005 and 0.2 M
 NaClO4.

 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

Pr+++ gl KNO3 25°C 0.10M U K1=6.61 B2=11.94 1969CMb (53686) 499
 K3=4.45

 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

Pr+++ cal NaClO4 25°C 0.10M U H K1=2.06 B2=3.60 1982CBc (53854) 500
 DH1= 8.5 kJ mol-1, DS1= 68 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

Pr+++ gl NaClO4 25°C 0.1M C H 1996HYa (54280) 501
 By calorimetry: DH(K1)=2.07 kJ mol-1, DH(B2)=3.63 J K-1 mol-1

Pr+++ gl NaNO3 25°C 0.10M U I M K1=7.86 1996KDc (54281) 502
 *K(PrL)=-7.94
 K(Pr(egta)+L)=5.65
 Data for 0.05 and 0.15 M NaNO3. At I=0, K1=8.17, *K(PrL)=-8.09,
 K(Pr(egta)+L)=5.81.

Pr+++ gl NaClO4 25°C 0.10M C T 1989HMa (54282) 503
 K(Pr+HL)=1.88

K(PrHL+HL)=1.82

Pr+++ gl alc/w 25°C 40% U M T K1=7.73 1986LSb (54283) 504
K(Pr(EDTA)+L)=7.54

Medium: 40% v/v EtOH/H2O, 0.2 M NaClO4

Pr+++ gl NaClO4 25°C 0.20M U M K1=7.81 1985LSf (54284) 505
K(Pr(edta)+L)=7.58

Pr+++ gl KNO3 30°C 0.10M U M 1976RTb (54285) 506
K(Pr(NTA)+L)=6.90

Pr+++ ix mixed 20°C 50% U 1976TRa (54286) 507
K(Pr+HL)=2.69
K(Pr+2HL)=4.65
K(Pr+3HL)=5.40

Medium: 50% v/v acetone/H2O, 0.25 M NaClO4

Pr+++ gl alc/w 25°C 100% U K1=5.36 B2=10.11 1973BPd (54287) 508
K3=3.57

Medium: 99.9% MeOH, 0.1 M NaCl

Pr+++ gl KCl 30°C 0.10M U K1=2.68 1962CTa (54288) 509

C7H6O3 H2L CAS 139-85-5 (881)
3,4-Dihydroxybenzaldehyde, protocatechuic aldehyde; C6H3(OH)2.CHO

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

Pr+++ gl diox/w 25°C 50% U T H K1=9.39 1976MMb (54358) 510
K(PrA+L)=5.18

DH(K1)=-3.2 kJ mol⁻¹, DH(PrA+L)=-4.4. H4A=EDTA

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

Pr+++ gl NaClO4 25°C 0.10M C 1988LLa (54387) 511
B(Pr+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

Pr+++ gl NaClO4 25°C 0.10M C 1988LLa (54430) 512
K(Pr+HL)=2.23

C7H6O4 H3L Resorcylic acid CAS 89-86-1 (876)

2,4-Dihydroxybenzoic acid, b-Resorcylic acid; C6H3(OH)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaCl04	25°C	0.20M	U	M T		K1=6.34 K(Pr(EDTA)+L)=4.19	1986LSb (54537)	513
Pr+++	gl	NaCl04	25°C	0.20M	U	M		K1=6.34 K(Pr(edta)+L)=4.19 B(Pr(edta)L)=16.34	1985LSd (54538)	514
Pr+++	gl	NaCl04	25°C	0.20M	U	M		K1=6.41 K(Pr(edta)+L)=4.26	1985LSf (54539)	515

C7H6O4 H3L Protocatechuic CAS 99-50-3 (875)
3,4-Dihydroxybenzoic acid; C6H3(OH)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaCl04	25°C	0.20M	U			K1=10.18	1996PJa (54691)	516
Pr+++	gl	NaCl04	25°C	0.20M	U	M		K1=8.23 K(Pr(EDTA)+L)=4.60	1986LSb (54692)	517
Pr+++	gl	NaCl04	25°C	0.20M	U	M		K1=8.23 K(Pr(edta)+L)=4.60 B(Pr(edta)L)=16.75	1985LSd (54693)	518
Pr+++	gl	NaCl04	25°C	0.20M	U	M		K1=8.31 K(Pr(edta)+L)=4.68	1985LSf (54694)	519
Pr+++	gl	NaCl04	25°C	0.20M	U	T H		K1=5.74 K(PrA+L)=3.40	1976MMb (54695)	520

DH(K1)=-9.2 kJ mol⁻¹, DH(PrA+L)=-7. H4A=EDTA (probably based on HL, not L)

C7H6O5 H4L Gallic acid CAS 149-91-7 (446)
3,4,5-Trihydroxybenzoic acid; C6H2(OH)3.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaCl04	30°C	0.20M	U	M		K1=12.08 K(Pr(NTA)+L)=6.01	1978MSk (54760)	521
Pr+++	gl	NaCl04	28°C	0.10M	U			K(Pr+H3L)=7.12 K(Pr+2H3L)=12.73	1976ABa (54761)	522

C7H6O5S H2L CAS 632-25-7 (4436)
2-Carboxybenzenesulfonic acid; HOOC.C6H4.SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	KCl	25°C	0.20M	U		K1=2.0	1973DPa (54781)	523

		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
Pr+++	gl	KNO3	20°C	0.10M	U T		K1=7.55	1982DBa (55035)	524
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.81 B2=12.47 K3=3.63 K(Pr(NTA)+L)=6.24 K(PrA+L)=4.94 K(Pr(edta)+L)=4.44	1978MMj (55036)	525
A is N-hydroxyethylenediamine-N,N',N'-triethanoic acid.									

Pr+++	gl	KNO3	30°C	0.10M	U	M		1976RTb (55037)	526
K(Pr(NTA)+L)=5.44									
Pr+++	gl	NaClO4	20°C	1.0M	U		K1=6.23 B2=11.24	1972CBb (55038)	527
Pr+++	sp	NaClO4	20°C	0.10M	U		K1=7.08 B2=12.69 K(Pr+HL)=1.99	1968KTb (55039)	528

		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
Pr+++	gl	NaClO4	25°C	0.50M	C	T	K1=7.66 B2=12.72	1976LAc (55100)	529

		C7H7NOS	HL				(2034)		
N-Thioformyl-N-phenylhydroxylamine; H(C:S)N(C6H5)OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	diox/w	30°C	70%	U		K1=7.56 B2=13.34	1981MBb (55155)	530

		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
Pr+++	gl	NaNO3	25°C	0.10M	M	I M	K1=3.56 K(Pr(egta)+L)=2.87	1995KDC (55252)	531
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=3.93, K(Pr(egta)+L)=3.25.									

Pr+++	gl	NaClO4	25°C	0.10M	C		K1=2.33 B2=4.39	1989HMa (55253)	532
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Pr+++ gl alc/w 25°C 0.20M U M K1=2.90 1986LSb (55254) 533
K(Pr(EDTA)+L)=2.40

Pr+++ gl non-aq 25°C 100% U K1=6.48 B2=12.08 1970BBh (55255) 534
K3=3.40
K4=2.46

Medium: MeOH, 0.1 M NaCl

Pr+++ gl KCl 30°C 0.10M U K1=3.22 1962CTa (55256) 535

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

Pr+++ gl KCl 25°C 0.20M U K1=2.39 1977EBa (55391) 536

C7H7NO2 HL CAS 495-18-1 (184)

Benzohydroxamic acid; C6H5.CO.NH.OH

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

Pr+++ gl diox/w 35°C 50% A K1=9.65 B2=17.80 1977AKa (55513) 537
K3=7.13

C7H7NO3 H2L CAS 89-73-6 (204)
2-Hydroxybenzohydroxamic acid (salicylhydroxamic acid); HO.C6H4.CO.NHOH

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

Pr+++ gl KNO3 25°C 0.1M M K1=10.48 B2=19.98 1989LWa (55607) 538
K3=9.05

Pr+++ gl mixed 25°C 75% U 1970SEa (55608) 539

K(Pr+HL)=6.94
K(PrHL+HL)=6.50
K(Pr(HL)2+HL)=4.98

Medium: 75% acetone, 0.1 M NaCl04

C7H7NO5S H2L CAS 3577-63-7 (3181)
5-Sulfoanthranilic acid; (5-sulfo-2-aminobenzoic acid)

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

Pr+++ gl NaNO3 25°C 0.10M M I M K1=3.46 1995KDC (55679) 540
K(Pr(egta)+L)=2.69

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=3.88, K(Pr(egta)+L)=2.96.

C7H7NO6S H3L CAS 6201-86-1 (7899)

3-Amino-5-sulfosalicylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KCl	25°C	0.20M	M	T H		K1=7.89 K(Pr+OH+L)=14.84	1991BPb (55693)	541

DH(K1)=-97 kJ mol⁻¹, DS(K1)=-172 J K⁻¹ mol⁻¹.

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
Pr+++	gl	NaNO ₃	25°C	0.0	U	M		K1=9.74 K(Pr(egta)+L)=5.68	1996KDb (56076)	542

Extrapolated from data for I=0.05-0.15 M NaNO₃.

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
Pr+++	sp	KCl	25°C	0.10M	M	I		K1=5.94	1986PLb (56132)	543

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
Pr+++	sp	KCl	25°C	0.10M	M	I		K1=5.63	1986PLb (56151)	544

C7H11NO4 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
Pr+++	gl	KNO ₃	25°C	0.10M	U			K1=5.83 B2=10.61	1963THb (56811)	545

C7H11NO6 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
Pr+++	gl	KNO ₃	25°C	0.1M	U			K1=8.35	1982KKc (56850)	546

C7H11NO6 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
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Pr+++ gl KNO3 20°C 0.10M U K1=11.73 B2=19.87 1974RMg (56915) 547

C7H12N2O3 HL Gly-Pro CAS 704-15-4 (257)
Glycyl-proline; H2N.CH2.CO.NC4H7.COOH

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

Pr+++ gl KNO3 25°C 0.15M M T H K1=3.59 1979SKd (57128) 548
Data for 35 and 45 C. At 35 C, K1=3.67, DH(K1)=20.1 kJ mol⁻¹,
DS(K1)=135 J K⁻¹ mol⁻¹.

C7H12O3 HL CAS 609-69-8 (3731)
2-Hydroxycyclohexanecarboxylic acid; HO.C6H10.COOH

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

Pr+++ gl NaClO4 25°C 1.0M U K1=2.05 B2=3.61 1967STd (57266) 549

C7H12O3 HL (4422)
3-Methyl ethylacetoacetate; CH3.CO.CH(CH3).CO.OCH2.CH3

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

Pr+++ gl mixed 30°C 75% U K1=7.75 1971DRb (57277) 550
Medium: 75% acetone, 0.1 M

C7H12O4 H2L Pimelic acid CAS 111-16-0 (985)
1,7-Heptanedioic acid; HOOC.(CH2)5.COOH

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

Pr+++ gl KNO3 25°C 0.20M U M 1990KMF (57311) 551
K(Pr(nta)+L)=5.34
K(Pr(hedta)+L)=5.29
K(Pr(cdta)+L)=5.24
K(Pr(dtpa)+L)=5.14
hedta is N-(hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid.

C7H12O4 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

Pr+++ gl KNO3 25°C 0.10M U K1=3.91 B2=6.49 1968PFa (57370) 552

C7H12O6 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

Pr+++ gl NaCl 20°C 0.10M U K1=2.72 1977SSc (57408) 553

Pr+++ EMF NaClO4 25°C 1.0M U K1=2.50 B2=4.33 19670Ta (57409) 554
K3=1.27
K4=0.67

Method: quinhydrone electrode

C7H13NO5 H3L CAS 68728-44-9 (8801)
(R,R)-4-Propylamidotartrate;

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

Pr+++ gl NaClO4 25°C 0.10M U K1=2.76 2000GRa (57552) 555
B(PrH-1L)=-3.66
B(PrH-2L)=-10.71
B(PrH-3L)=-22.34

Alternative model: K1=2.72, B(PrH-1L)=-3.69, B(PrH-2L)=-10.75, B(Pr2H-5L2)
=-29.98.

C7H13NO5 H2L (8081)
4-Hydroxy-2-aminopentane-1,5-dioic acid;

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

Pr+++ gl KCl 20°C 0.1M U K1=5.81 1978KPe (57557) 556
Data for threo isomer. For erythro isomer: K1=5.65

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

Pr+++ gl KNO3 20°C 0.10M U K1=8.33 B2=15.18 1980RPa (57618) 557

C7H14N2O3 HL Gly-Val CAS 7963-21-9 (973)
Glycyl-valine; H2N.CH2.CO.NH.CH(CH(CH3)2).COOH

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

Pr+++ gl KNO3 30°C 0.15M U T H K1=3.70 1980SKe (57756) 558
Data for 20 and 40 C. DH(K1)=18.6 kJ mol⁻¹, DS(K1)=133 J K⁻¹ mol⁻¹.
Ligand is glycyl-DL-valine.

C7H14O3 HL CAS 63204-98-9 (3738)
2-Hydroxy-2,4-dimethylpentanoic acid; (CH3)2.CH.CH2.C(CH3)(OH).COOH

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

Pr+++ EMF NaClO4 25°C 1.0M U K1=2.51 B2=4.03 1965TVa (57865) 559

K3=1.48

Method: quinhydrone electrode

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

Pr+++ gl NaClO4 25°C 0.10M C K1=2.08 B2=3.54 1976SPa (57878) 560

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

Pr+++ gl KNO3 20°C 0.10M U K1=5.21 B2=9.07 1982RFa (57941) 561

C7H15NO5S HL MOPSO CAS 68399-77-9 (1967)
3-(N-Morpholino)-2-hydroxypropane sulfonic acid;

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

Pr+++ gl KNO3 25°C 0.10M C K1=3.36 2001AAb (57997) 562

*K(PrL)=-5.44
K(2Pr(OH)L=Pr2(OH)2L2)=8.82

C8H20Cl4 H2L CAS 632-58-6 (3214)
Tetrachlorophthalic acid; Cl4.C6(COOH)2

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

Pr+++ gl oth/un 20°C 0.10M U Kso=5.24 1960Wka (58392) 563

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

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

Pr+++ sp non-aq 25°C 100% C K1=5.76 2003ZRa (58528) 564

Medium: DMSO.

Pr+++ sp non-aq 25°C 100% U K1=5.45 1983PSc (58529) 565
Medium: DMSO

Pr+++ sp KNO3 12°C 0.10M U K(Pr+H2L)=3.78 1965GEa (58530) 566

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

Pr+++ cal non-aq 25°C 100% C H 2004MIa (58667) 567
Method: calorimetric titration. Medium: chloroform. DH(PrL3+A)=6.4 kJ
mol⁻¹, DS=78.2 J K⁻¹ mol⁻¹; DH(PrL3+2A)=3.0, DS=123.5. HA is benzoic acid.

Pr+++ gl alc/w 22°C 80% U K1=6.11 B2=11.42 1995MTa (58668) 568
K3=3.84
Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

Pr+++ gl mixed 25°C 50% U K1=5.56 1980SBc (58669) 569
Medium: 50% MeCN

Pr+++ dis non-aq 25°C 100% U 1954KSa (58670) 570
K(Pr+3HT(bz)=PrT3(bz)+3H)=9.53
Medium: benzene, extracted from 0.1 M NH4Cl

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

Pr+++ gl NaNO3 25°C 0.10M M I M K1=4.37 1995KDb (59004) 571
K(Pr(egta)+L)=4.06
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=4.71, K(Pr(egta)+L)=4.36.

Pr+++ gl alc/w 25°C 40% U M K1=4.55 1986LSb (59005) 572
K(Pr(EDTA)+L)=3.63
Medium: 40% v/v EtOH/H2O, 0.2 M NaClO4

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.60 1985LSf (59006) 573
K(Pr(edta)+L)=3.67

Pr+++ gl NaClO4 30°C 0.10M U K1=4.22 B2=7.43 1966KPb (59007) 574

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

Pr+++ cal NaClO4 25°C 0.10M U H K1=2.55 1982CBc (59059) 575
DH= 13.47 kJ mol⁻¹, DS= 94 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

Pr+++ gl diox/w 20°C 50% U K1=5.86 B2=11.00 1971MAF (59106) 576

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

C8H7NO3 HL (7376)
benzoylhydroxamic acid; C6H5COCONHOH

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

Pr+++ gl KNO3 25°C 0.1M M K1=9.25 B2=17.74 1989LWa (59128) 577
K3=8.26

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

Pr+++ gl alc/w 25°C 20% M I K1=5.63 1994KDa (59221) 578
Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Also data for 0.05 and 0.15 M
NaNO3. At I=0 (20% v/v), K1=5.95, *K(PrL)=-8.88, *K(Pr(OH)L)=-9.13.

C8H8N2O L CAS 4856-97-7 (3820)
2-(Hydroxymethyl)benzimidazole;

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

Pr+++ gl diox/w 30°C 50% U T H B2=15.89 1988NOa (59313) 579
40 C: B2=15.81; 50 C: B2=15.74. DH=-15.3 kJ mol⁻¹, DS=253 J K⁻¹ 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

Pr+++ gl diox/w 20°C 50% U K1=6.55 B2=12.28 1971MAF (59341) 580
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

Pr+++ gl alc/w 25°C 75% C I K1=7.12 B2=13.98 1988GSa (59411) 581
In 75%(v/v) ethanol/water; 0.1 M NaClO4. I=0.2 M: K1=7.05, K2=6.78;
I=0.05 M: K1=7.33, K2=6.79; I=0.02 M: K1=7.40, K2=7.13

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

Pr+++ gl alc/w 25°C 20% M I K1=6.25 1994KDa (59469) 582

Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Also data for 0.05 and 0.15 M NaNO3. At I=0 (20% v/v), K1=6.54, *K(PrL)=-8.81, *K(Pr(OH)L)=-9.36.

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

Pr+++ gl NaClO4 25°C 0.1M C H K1=2.04 1996HYa (59560) 583
By calorimetry: DH(K1)=10.43 kJ mol-1

Pr+++ gl NaClO4 25°C 0.10M C H K1=2.04 1990HYa (59561) 584
By calorimetry: DH(K1)=10.4 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

Pr+++ sp alc/w ? 3% U K1=6.71 1967GDb (59603) 585
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

Pr+++ gl alc/w 25°C 20% M I K(Pr+HL)=6.03 1994KDa (59682) 586

Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Also data for 0.05 and 0.15 M NaNO3. At I=0 (20% v/v), K1=6.32, *K(PrHL)=-8.74, *K(Pr(OH)HL)=-9.16.

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

Pr+++ gl NaClO4 25°C 0.10M M H K1=1.96 1988CLb (59745) 587
DH=8.74 kJ mol-1, DS=69 J K-1 mol-1

Pr+++ gl alc/w 25°C 42% U K1=2.9 1983PMa (59746) 588

Pr+++ sp KCl 25°C 0.10M U K1=1.14 B2=1.62 1981MTc (59747) 589

Pr+++ gl diox/w 30°C 76% M K1=6.88 1978PMa (59748) 590
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

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
Pr+++	cal	alc/w	25°C	60%	U	H			1996YLa (59862)	591

K(PrL+Phen)=3.27

Medium: 60% v/v MeOH/H2O. Phen: 1,10-phenanthroline.
 DH=-5.35 kJ mol⁻¹, DS=44.6 J K⁻¹ mol⁻¹.

Pr+++	gl	NaClO4	25°C	0.10M	C			K1=2.76 B2=4.65	1989HMa (59863)	592
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Pr+++	gl	NaClO4	25°C	2.0M	U	T		K1=2.30	1972DCb (59864)	593
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Pr+++	ix	NaClO4	20°C	0.20M	U			K1=2.36 B2=4.17 B3=5.14	1968WZa (59865)	594
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Pr+++	gl	KNO3	25°C	1.0M	U	I		K1=2.11 B2=3.71	1967PNb (59866)	595
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At I=0.1: K1=2.43, K2=1.84

Pr+++	gl	NaClO4	25°C	1.0M	U			K1=2.48 B2=4.10 K3=1.35 K4=0.89	1966TVa (59867)	596
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 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
Pr+++	gl	NaClO4	25°C	0.10M	M	H		K1=2.00	1988CLb (59917)	597

DH=9.78 kJ mol⁻¹, DS=71 J K⁻¹ mol⁻¹

 C8H8O3 HL CAS 148-52-8 (3193)
 3-Methoxysalicylaldehyde; CH3O.C6H3(OH).CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaNO3	25°C	0.10M	M	I	M	K1=4.448	1995KDD (59931)	598

K(Pr(egta)+L)=2.959

Data for 0.15 and 0.05 M NaNO3. At I=0, K1=4.701, K(Pr(egta)+L)=3.237.

 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
Pr+++	gl	NaClO4	25°C	0.10M	M	H		K1=2.09	1988CLb (59960)	599

DH=8.95 kJ mol⁻¹, DS=70 J K⁻¹ mol⁻¹

Pr+++	gl	diox/w	30°C	76%	M			K1=7.22	1978PMa (59961)	600
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Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

 C8H8O4 H3L CAS 480-66-0 (8525)

2,4,6-Trihydroxyacetophenone;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  diox/w 25°C  50% M          K1=3.31      1978AGc (60056) 601
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.
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C8H8O4 HL CAS 520-45-6 (4478)
3-Acetyl-2-hydroxy-6-methylpyran-4-one, Dehydroethanoic acid;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  diox/w 35°C  50% U          K1=4.27  B2=7.68  1971MAa (60095) 602
Medium: 50% dioxan, 0.1 M NaClO4
*****
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C8H9NO2 HL CAS 4389-45-1 (3226)
3-Methyl-2-aminobenzoic acid; CH3.C6H3(NH2).COOH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  NaNO3 25°C 0.10M M I M      K1=4.92      1995KDc (60235) 603
K(Pr(egta)+L)=4.52
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=5.18, K(Pr(egta)+L)=4.21.
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C8H9NO2 HL CAS 5330-97-2 (6248)
Phenylacetohydroxamic acid; C6H5.CH2.CO.NH.OH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  KNO3  30°C 0.10M C M      K1=5.59  B2=10.89  1987RSc (60352) 604
K3=4.45
K(Pr(hedta)+L)=4.15
hedta is N-hydroxyethyl diaminoethane-N,N',N'-triethanoic acid.
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Pr+++      gl  KNO3  20°C 0.10M M T          K1=5.67  B2=11.04  1986RSc (60353) 605
K3=4.52
Data for 20-50 C. At 30 C, K1=5.59, K2=5.30, K3=4.45.
*****
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C8H9NO2S HL CAS 104-18-7 (4575)
(4-Aminophenylthio)ethanoic acid; H2N.C6H4.S.CH2.COOH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  KNO3  25°C 0.05M M          K1=3.50      1975DPb (60376) 606
*****
C8H9NO4 H2L (4520)
Dehydroethanoic acid oxime;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Pr+++ gl diox/w 35°C 50% U 1971MAa (60501) 607
K(Pr+HL)=4.08
K(Pr+2HL)=7.36

Medium: 50% dioxan, 0.1 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

Pr+++ gl NaClO4 25°C 0.10M U K1=12.60 B2=23.80 1980ZMa (60571) 608

C8H10N06P H3L Codecarboxylase CAS 41468-25-1 (2555)

Pyridoxal-5-phosphoric acid;

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

Pr+++ gl KCl 25°C 0.50M U 1978AAa (60705) 609

K(Pr+H3L)=0.69

K(Pr+H2L)=2.16

C8H10N6O2S2 H2L (2746)

2,5-Dihydroxybenzoquinone bis-thiosemicarbazone;

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

Pr+++ gl diox/w 30°C 50% C TIH K1=4.98 B2=8.99 1989GDa (60818) 610

DH(K1)=-95.73 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

Pr+++ gl alc/w 22°C 20% U K1=4.34 B2=7.74 1988ZTa (60853) 611

K3=2.99

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

Pr+++ gl KCl 30°C 0.10M C K1=6.02 B2=10.32 1996SZa (60874) 612

For the -5-en-2-exo isomer, K1=6.19, B2=10.94.

C8H11N08 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

Pr+++ gl KCl 25°C 0.10M U K1=11.50 B2=17.96 1979BEb (61214) 613
B(PrHL)=15.63

C8H11N09P2 H5L CAS 147608-63-7 (8924)

[(2-Hydroxy-5-nitro-1,3-phenylene)bis(methylene)]bisphosphonic acid;

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

Pr+++ gl NaClO4 25°C 0.10M U K1=12.5 2002BBh (61234) 614

B(PrHL)=20.0

B(PrH2L)=24.8

B(PrH3L)=27.0

B(PrH-1L)=2.2

B(PrH-2L)=-9.2. By spectrophotometry, K1=11.89, B(PrHL)=19.88, B(PrH2L)=

24.19, B(PrH3L)=28.6, B(PrH-1L)=2.2, B(PrH-2L)=-8.8.

C8H1107ClP2 H5L CAS 147608-64-8 (8925)

[(5-Chloro-2-hydroxy-1,3-phenylene)bis(methylene)]bisphosphonic acid;

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

Pr+++ gl NaClO4 25°C 0.10M U K1=11.4 2002BBh (61318) 615

B(PrHL)=19.48

B(PrH2L)=24.82

B(PrH-1L)=2.9

B(PrH-2L)=-8.1

C8H12N2O3 H2L Barbitol CAS 57-44-3 (2744)

5,5-Diethylbarbituric acid, Veronal, Barbitone;

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

Pr+++ gl oth/un 25°C 0.10M U K1=3.250 1987TSb (61441) 616

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

Pr+++ gl KNO3 20°C 0.10M U K1=12.00 B2=16.23 1975DPa (61519) 617

Pr+++ vlt KNO3 25°C 0.10M U K1=10.50 1972GBd (61520) 618

C8H12O2 HL CAS 874-23-7 (3203)

2-Acetylcyclohexanone;

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

Pr+++ gl mixed 25°C 75% U K1=8.58 B2=16.48 1971DRa (61676) 619

K3=7.92

Medium: 75% acetone, 0.1 M NaClO4

C8H12O2 HL Dimedone CAS 126-81-8 (1137)
5,5-Dimethyl-1,3-cyclohexanedione;

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

Pr+++ gl NaClO4 30°C 0.10M U K1=2.64 B2=5.19 1975DSa (61690) 620

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

Pr+++ gl NaClO4 25°C 0.10M M H K1=4.35 1986CDb (61714) 621
DH=11.9 kJ mol⁻¹, DS=123 J K⁻¹ mol⁻¹

C8H13NO6 H3L (3835)
2-Amino-2-carboxypropane-N,N-diethanoic acid; HOCC(CH3)2N(CH2COOH)2

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

Pr+++ gl KNO3 20°C 0.10M U K1=9.00 B2=15.28 1974RMg (61767) 622

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

Pr+++ gl KNO3 20°C 0.10M U K1=10.67 B2=18.11 1974RMg (61793) 623

C8H13NO6S H3L (5675)
2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; HOOC.CH2.S.CH2.CH2.N(CH2COOH)2

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

Pr+++ gl NaClO4 25°C 0.10M U K1=8.14 1975POa (61829) 624
K(Pr+HL)=2.37

C8H13N2O5P H3L CAS 951-83-7 (2556)
Pyridoxamine-5-phosphate;

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

Pr+++ gl KCl 25°C 0.50M U 1978AAa (61842) 625

K(Pr+H4L)=0.60

K(Pr+H3L)=1.11

K(Pr+H2L)=2.50

K(Pr+2H2L)=5.36

C8H1403 HL CAS 607-97-6 (4489)
3-Ethylethylacetoacetate; CH3.CO.CH(C2H5).CO.OC2H5

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

Pr+++ gl mixed 30°C 75% U K1=8.22 1971DRb (62081) 626
Medium: 75% acetone, 0.1 M

C8H1404 H2L Suberic acid CAS 505-48-6 (517)
Octanedioic acid; HOOC.(CH2)6.COOH

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

Pr+++ gl KNO3 25°C 0.20M U M 1990KMF (62100) 627

K(Pr(nta)+L)=3.38
K(Pr(hedta)+L)=3.32
K(Pr(cdta)+L)=3.26
K(Pr(dtpa)+L)=3.22

hedta is N-(hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid.

C8H1603 HL CAS 58888-84-9 (3807)
2-Hydroxy-2-propylpentanoic acid; CH3.CH2.CH2.C(OH)(CH2.CH2.CH3).COOH

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

Pr+++ EMF NaClO4 25°C 1.0M U K1=2.53 B2=4.03 1965TVa (62636) 628
Method: quinhydrone electrode

C8H1604 L 12-Crown-4 CAS 294-93-9 (174)
1,4,7,10-Tetraoxacyclododecane; cyclo(-O.(CH2.CH2.O)3.CH2.CH2-)

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

Pr+++ ISE non-aq 25°C 100% U K1=5.27 B2=7.09 1982MDa (62720) 629
Medium: propylene carbonate

C8H18N202 L CAS 122-96-3 (5902)
N,N-Bis(2-hydroxyethyl)piperazine;

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

Pr+++ gl NaCl 25°C 0.10M C K1=2.33 1999HLb (62859) 630
B(PrHL)=9.18

C8H18N204S HL HEPES CAS 7365-45-9 (2786)
4-(2-Hydroxyethyl)-1-piperazine-ethanesulfonic acid;

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

Pr+++ gl KNO3 25°C 0.10M C K1=3.44 2001AAb (62877) 631

*K(PrL)=-6.02
K(2Pr(OH)L=Pr2(OH)2L2)=9.89

C8H18O4 L Triglyme CAS 112-49-2 (2358)
1,2-Bis(methoxyethoxy)ethane; CH3O.C2H4O.CH2.CH2.OC2H4.OCH3

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

Pr+++ gl non-aq 25°C 100% C K1=3.64 1989BPa (62994) 632
Medium: anhydrous propylene carbonate, 0.1 M Et4NC104

C8H19O4P HL CAS 107-66-4 (2130)
Dibutylphosphoric acid; (C4H9O)2P(O)OH

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

Pr+++ dis KNO3 ? 0.50M U 1961SKb (63191) 633
K(Pr+3HL+3L)=15.0

Medium: HNO3

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

Pr+++ gl diox/w 35°C 75% U K1=6.50 B2=12.20 1971MAb (63569) 634
K3=4.90

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

Pr+++ sp diox/w 20°C 50% U K1=2.50 B2=3.44 1977MBb (63613) 635

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

Pr+++ gl NaClO4 25°C 0.10M U K1=4.97 B2=9.27 1973MAa (63702) 636
K3=3.90

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

Pr+++ gl NaClO4 25°C 0.10M U I K1=4.96 B2=9.66 1987BCd (63823) 637

B3=13.29

Data also in 42% MeOH, 51.1% EtOH and 61.2% dioxan

```
-----
Pr+++      gl  NaClO4 25°C 0.20M U T M  K1=5.38  B2=9.71  1978MMh (63824) 638
                                          K3=3.74
                                          K(Pr(NTA)+L)=4.30
                                          K(Pr(HEDTA)+L)=4.24
                                          K(Pr(EDTA)+L)=3.63
-----
```

```
Pr+++      gl  oth/un 20°C 0.10M U      K1=5.60      1977SKd (63825) 639
*****
C9H6N3OClS      HL      CAS 27004-41-7 (216)
2-(2'-Thiazolyazo)-4-chlorophenol; C3H2NS.N:N.C6H3(Cl).OH
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  KNO3 25°C 0.10M U      K1=7.48      1974KSa (63929) 640
*****
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
-----
Pr+++      gl  NaClO4 25°C 0.10M U  H  K1=5.01      1994CRa (63975) 641
                                          K(Pr+HL)=2.59
DH(K1)=14.0 kJ mol-1; DS=143 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
-----
Pr+++      sol none RT 0.0 U      1981FCa (64335) 642
                                          Kso(PrL3)=-29.59
Method: spectrophotometry.
-----
```

```
Pr+++      gl  oth/un 20°C 0.10M U      K1=6.47      1977SKd (64336) 643
-----
```

```
Pr+++      gl  diox/w 30°C 50% U      K1=8.75  B2=16.80  1970GMb (64337) 644
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
-----
Pr+++      gl  diox/w 30°C 50% U      K1=6.80      1970GMb (64410) 645
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
-----
Pr+++      gl  NaClO4 25°C 0.20M U T M   K1=5.87   B2=10.71  1978MMh (64574) 646
                                     K3=3.56
                                     K(Pr(NTA)+L)=4.65
                                     K(Pr(HEDTA)+L)=4.21
                                     K(Pr(EDTA)+L)=4.17
-----
```

```
-----
Pr+++      gl  KNO3   30°C 0.10M U   M           1976RTb (64575) 647
                                     K(Pr(NTA)+L)=4.52
-----
```

```
-----
Pr+++      cal KNO3   20°C 0.10M U   HM          1971GKb (64576) 648
                                     K(PrA+L)=4.01
DH(PrA+L)=-20.2 kJ mol-1, DS=7.94 J K-1 mol-1
DH(PrAL): DH=-33.56, DS=275.9. H4A=EDTA
-----
```

```
-----
Pr+++      gl  oth/un 25°C 0.0 U   H   K1=6.17   B2=11.37  1958FOb (64577) 649
                                     K3=4.3
DH(K1)=-14.2 kJ mol-1, DS=71 J K-1 mol-1; DH(K2)=-11.7, DS=59, DH(K3)=-20.1,
DS=17
-----
```

```
*****
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
-----
Pr+++      sp  NaNO3   25°C 0.10M C           K1=7.65   1985OHb (64721) 650
                                     K(Pr+HL)=4.27
                                     K(PrL+H)=6.06
-----
```

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

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      sp  NaClO4   ?  0.20M U           K1=7.45   1967GDc (64951) 651
                                     K(PrHL)=10.07
-----
Pr+++      gl  NaClO4 25°C 0.20M U           K1=7.74   B2=13.70  1966GDa (64952) 652
                                     K3=3.56
-----
```

```
*****
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
-----
Pr+++      gl  KCl     30°C 0.10M U           K1=4.15   1996SZa (64980) 653
-----
*****
```

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

Pr+++ gl diox/w 27°C 0.10M U K1=4.21 1982LMa (65164) 654

C9H10O2 HL Benzylacetic CAS 501-52-0 (1362)
3-Phenylpropanoic acid; C6H5.CH2.CH2.COOH

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

Pr+++ gl NaClO4 25°C 0.1M C H K1=2.08 B2= 3.60 1996HYa (65371) 655
By calorimetry: DH(K1)=10.65 kJ mol-1, DH(B2)=5.47 J K-1 mol-1

Pr+++ gl NaClO4 25°C 0.10M C H K1=2.08 B2=3.60 1990HYa (65372) 656
By calorimetry: DH(K1)=10.7 J K-1 mol-1, DH(K2)=-5.2

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

Pr+++ ix NaClO4 20°C 0.20M U K1=2.45 B2=4.20 1968WZa (65442) 657
B3=5.11

Pr+++ gl NaClO4 25°C 1.0M U K1=2.40 B2=3.96 1966TVa (65443) 658
K3=1.36
K4=0.92

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

Pr+++ gl NaClO4 25°C 0.10M C K1=2.16 B2=3.57 1989HMa (65465) 659

C9H10O3 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

Pr+++ gl NaClO4 25°C 0.10M C K1=2.14 B2=4.00 1989HMa (65479) 660

C9H10O4 HL CAS 1521-38-6 (8489)
2,3-Dimethoxybenzoic acid;

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

Pr+++ gl diox/w 25°C 76% M K1=6.89 1978PMa (65533) 661

Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

C9H10O4 HL CAS 91-52-1 (8490)
2,4-Dimethoxybenzoic acid;

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

Pr+++ gl diox/w 25°C 76% M K1=7.63 1978Pma (65540) 662
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

C9H10O4 HL CAS 1466-76-8 (8491)
2,6-Dimethoxybenzoic acid;

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

Pr+++ gl diox/w 25°C 76% M K1=6.42 1978Pma (65547) 663
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

C9H10O4 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

Pr+++ gl KCl 30°C 0.10M C K1=4.01 B2=6.88 1996SZa (65576) 664
For the -2,5-dien-2-exo isomer, K1=4.15.

C9H10O4 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

Pr+++ gl NaClO4 24°C 0.10M U K1=4.38 1986ZBa (65591) 665
K(Pr+HL)=1.80

C9H10O5 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

Pr+++ gl KCl 30°C 0.10M U K1=5.35 B2= 7.97 1996SZa (65608) 666

C9H10O5 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

Pr+++ gl KCl 30°C 0.10M C K1=5.35 B2=7.97 1996SZa (65623) 667

C9H10O8 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
-----
Pr+++      gl  NaCl04 30°C 0.20M U T      K1=10.05      1979NSb (65648) 668
                                         K1=10.13 when T=40.
                                         K2=10.25 when T=50.

```

```

*****
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
-----
Pr+++      gl  NaCl   25°C 0.15M U  H      K1=3.13      1992ZNa (65968) 669
By calorimetry: DH(K1)=0.62 kJ mol-1, DS(K1)=62.01 J K-1 mol-1.

```

```

-----
Pr+++      gl  NaNO3  25°C 0.0 U      K1=4.35      1991ADb (65969) 670
Extrapolated from data for 0.01-0.1 M NaNO3. Data for 35 and 45 C.

```

```

-----
Pr+++      gl  KNO3   35°C 0.10M U      K1=4.80      1990RSe (65970) 671
*****
C9H11NO3      H2L Tyrosine      CAS 60-18-4 (4)
2-Amino-3-(4-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      vlt KCl   25°C 1.0M C T      K(Pr+HL)=4.35
Method: polarography. Medium pH 2.70. Also data for 35 C.

```

```

-----
Pr+++      gl  KNO3   25°C 0.10M U T H      K(Pr+HL)=4.35
                                         K(PrHL+HL)=3.88

```

```

*****
C9H11N3O2S      HL      CAS 51146-75-9 (6170)
N-(2-Hydroxy-3-methoxybenzylidene)thiosemicarbazide; CH3O(OH)C6H3.CH:N.CS.NH.NH2

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  diox/w 30°C 75% U      K1=7.36      1988MKd (66510) 674

```

```

*****
C9H11N3O3      HL      CAS 58336-41-7 (6169)
N-(2-Hydroxy-3-methoxybenzylidene)semicarbazide; CH3O(OH)C6H3.CH:N.CO.NH.NH2

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  diox/w 30°C 75% U      K1=9.85      1988MKd (66517) 675

```

```

*****
C9H12N2O6      HL  Uridine      CAS 58-96-8 (828)
Uracil-1-beta-D-ribofuranoside;

```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KNO3	35°C	0.10M	U	M		K1=4.36 K(PrA+L)=4.24 K(PrB+L)=4.04 K(PrC+L)=3.52	1990RSc (66712)	676

H2A=Iminodiethanoic acid, H3B=NTA, H4C=EDTA

Pr+++	gl	KNO3	35°C	0.10M	U	M		K1=4.15 K(PrL+Ala)=8.90 K(PrL+Phe)=8.62 K(PrL+Trp)=8.89	1990RSe (66713)	677
-------	----	------	------	-------	---	---	--	--	-----------------	-----

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
Pr+++	ISE	KNO3	25°C	0.10M	U			K1=11.95	1983KBd (66744)	678

Hg-electrode.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KNO3	25°C	0.10M	U			K1=10.01 B2=17.05	1968TKe (66892)	679

C9H13N2O9P H3L UMP-5 CAS 58-97-9 (2948)
 Uridine-5'-monophosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KNO3	35°C	0.10M	U	M		K(Pr+HL)=3.65 K(PrHL+Gly)=3.91 K(Pr+HL+His)=8.62 K(Pr+HL+histamine)=7.91	1992RAd (66981)	680

C9H13N3O5 L Cytidine CAS 65-46-3 (2152)
 Cytidine, Cytosine-1-beta-D-ribofuranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KNO3	35°C	0.10M	U	M		K1=2.96 K(Pr+HA+L)=7.34 B(PrLB)=14.28 B(PrLC)=19.37	1990RSc (67075)	681

H2A=Iminodiethanoic acid, H3B=NTA, H4C=EDTA

Pr+++ gl KNO3 35°C 0.10M U M K1=2.36 1990RSe (67076) 682
K(PrL+Ala)=4.85
K(PrL+Phe)=4.87
K(PrL+Trp)=5.19

Pr+++ gl KNO3 35°C 0.10M U M K1=2.96 1986Rmb (67077) 683
K(Pr+L+HGly)=8.37, K(Pr+L+HHis)=8.50, K(Pr+L+oxalate)=9.81

C9H14N3O8P H2L CMP-5 CAS 63-37-6 (1243)
Cytidine-5'-monophosphoric acid, Cytidilic acid;

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

Pr+++ gl KNO3 25°C 0.10M C M K1=4.60 2001AAb (67263) 684
*K(PrL)=-7.12
K(2Pr(OH)L=Pr2(OH)2L2)=12.13
B(PrLA)=8.42
B(PrLB)=7.53

B(PrLC)=8.68, B(PrLD)=6.94. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.

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

Pr+++ nmr KCl 25°C 2.00M U K(Pr+H2L)=0.78 1983MAa (67323) 685

Pr+++ nmr KCl 25°C 2.00M U K(Pr+H2L)=0.78 1982MAb (67324) 686
K(Pr+HL)=1.57

C9H14O7P2 H5L CAS 147608-61-5 (7128)
Hydroxy-4-methylbenzene-2,6-di(methylphosphonic acid);

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

Pr+++ gl NaClO4 25°C 0.10M U K1=12.0 2002BBh (67370) 687
B(PrHL)=20.7
B(PrH2L)=26.9
B(PrH3L)=29.6
B(PrH-1L)=1.2

B(PrH-2L)=-11.9.

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

Pr+++ gl KNO3 20°C 0.10M U K1=10.36 B2=17.73 1974RMg (67412) 688

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

Pr+++ cal NaClO4 25°C 0.50M M IH K1=11.89 1986RCa (67643) 689
DH=-15.7 kJ mol⁻¹, DS=175 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

Pr+++ gl KNO3 25°C 0.10M U K1=4.01 B2=6.93 1968PFa (67777) 690

C9H16O4 H2L Azelaic acid CAS 123-99-9 (3255)
Nonanedioic acid; HOOC.(CH2)7.COOH

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

Pr+++ gl KNO3 25°C 0.20M U M 1990KMF (67797) 691

K(Pr(nta)+L)=4.80
K(Pr(hedta)+L)=3.65
K(Pr(cdta)+L)=3.60
K(Pr(dtpa)+L)=3.55

hedta is N-(hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid.

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

Pr+++ gl alc/w 22°C 80% U K1=6.01 B2=11.44 1995MTa (68432) 692
K3=4.66

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

C10H6O3 HL CAS 481-39-0 (3295)
5-Hydroxy-1,4-naphthoquinone;

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

Pr+++ gl diox/w 25°C 50% C T H K1=7.56 B2=14.94 1992SAa (68479) 693
K3=6.77

At 35 C: K1=7.38, K2=6.55, K3=5.53; DH(K1)=-31.7 kJ mol⁻¹

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
Pr+++	gl	NaClO4	25°C	0.10M	U			K1=4.72 K(Pr+HL)=3.72	1994CRa (68526)	694

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
Pr+++	sp	KCl	25°C	0.10M	M	I		K1=4.29	1976PEa (68586)	695
Pr+++	gl	diox/w	30°C	75%	U			K1=9.04 B2=17.06 B3=23.85	1957CFa (68587)	696

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KNO3	25°C	0.10M	U			K1=5.53 B2=10.58	1982LPc (68654)	697
Pr+++	gl	diox/w	30°C	75%	U			K1=8.48 B2=15.78 B3=22.14	1957CFa (68655)	698

C10H7NO2			HL					Quinaldic acid CAS 93-10-7	(2209)	
Quinoline-2-carboxylic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaClO4	30°C	0.10M	U			K1=2.53 B2=4.79	1969DNc (68718)	699

C10H7NO2			HL					CAS 86-59-9	(873)	
Quinoline-8-carboxylic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaClO4	30°C	0.10M	U			K1=2.47	1969DNc (68770)	700

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
Pr+++	gl	KCl	25°C	0.10M	M			K1=4.32 B2=7.98	1979LSb (68817)	701

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pr+++ sp KCl 25°C 0.10M C K1=4.39 1973Pmb (68852) 702

Pr+++ gl KCl 25°C 0.10M U K1=4.25 B2=7.7 1970MSb (68853) 703

C10H7N05S H2L CAS 23525-13-6 (1813)
2-Nitroso-1-hydroxynaphthalene-5-sulfonic acid;

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

Pr+++ gl KCl 25°C 0.10M U K1=3.50 B2=6.3 1970MSb (68912) 704

C10H7N05S 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

Pr+++ sp KCl 25°C 0.10M M K1=5.28 1978PPb (68950) 705

C10H7N08S2 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

Pr+++ gl oth/un 25°C 0.10M U K1=5.26 B2=9.74 1990ATa (69026) 706
B3=13.57

Pr+++ gl NaClO4 25°C 0.20M U T M K1=4.29 B2= 7.15 1978MMk (69027) 707
K3=2.59
K(Pr(nta)+L)=2.98
K(PrA+L)=2.94
K(Pr(edta)+L)=3.16

Data for 35 and 45 C. H3A is N-hydroxyethylenediaminetriethanoic acid.

C10H7N08S2 H3L CAS 52664-45-6 (1627)
2-Nitroso-1-hydroxynaphthalene-4,6-disulfonic acid;

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

Pr+++ gl NaCl 25°C 0.10M U K1=3.670 B2=5.893 1974SAa (69053) 708

C10H7N08S2 H3L CAS 50332-99-3 (1628)
2-Nitroso-1-hydroxynaphthalene-4,7-disulfonic acid;

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

Pr+++ gl NaCl 25°C 0.10M U K1=3.803 B2=5.862 1974SAa (69063) 709

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

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  diox/w 25°C 75% U          K1=4.57  B2=8.85  1986MIa (69100) 710
*****
C10H7O2F3          HL          CAS 326-06-7 (196)
3-Benzoyl-1,1,1-trifluoroacetone; CF3.CO.CH2.CO.C6H5
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  alc/w 22°C 80% U          K1=6.69  B2=12.97 1995MTa (69161) 711
                               K3=5.62
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
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  NaNO3 25°C 0.50M U          K1=0.9          1979HJa (69636) 712
*****
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
-----
Pr+++     gl  diox/w 25°C 75% U          K1=5.05  B2=9.52  1986MIa (69734) 713
*****
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
-----
Pr+++     gl  NaClO4 20°C 0.10M U    M          1973PAc (69777) 714
                               K(PrA+L)=6.30, 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
-----
Pr+++     gl  NaClO4 30°C 0.20M U    M    K1=8.94          1978MSl (69857) 715
                               K(Pr(edta)+L)=5.40
-----
Pr+++     gl  NaClO4 25°C 0.50M C          K1=9.19  B2=16.27 1976LAd (69858) 716
                               B(PrHL2)=23.60
*****
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
Pr+++	gl	NaClO4	20°C	0.10M	M T H		K1=7.81	1978AKb (69965)	717
Data for 40 C. DH(K1)=-36.3 kJ mol ⁻¹ , DS(K1)=15 J K ⁻¹ mol ⁻¹ .									

C10H9N04S		H2L					CAS 29021-67-8	(3926)	
2-Methyl-8-hydroxyquinoline-5-sulfonic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	NaClO4	30°C	0.10M	U TI		K1=4.84 B2=9.33 B3=12.75	1988BCd (70201)	718
in 42.5% MeOH-water: K1=6.03, B2=11.11, B3=15.33									
51.8% EtOH-water: K1=6.45, B2=11.73, B3=15.70									

C10H9N3OS		HL					CAS 1823-44-5	(4780)	
2-(2'-Thiazolylazo)-4-methylphenol; CH3.C6H3(OH).N:N.C3H3NS									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	sp	alc/w	25°C	100%	U		K1eff=4.22	1989OKb (70351)	719
At pH 3.4 by competition with 18-crown-6. Medium: MeOH, 0.03 M Et4NC1O4									

C10H9N3OS		HL					CAS 60321-26-8	(4671)	
2-(2-Thiazolylazo)methylphenol; C3H2NS.N:N.C6H3(CH3)OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	sp	diox/w	25°C	10%	U		K1=8.91	1973KSd (70365)	720
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									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	sp	KNO3	25°C	0.10M	U		K1=8.52	1974KSa (70403)	721

C10H9O2Br		HL					CAS 4023-81-8	(1182)	
4-Bromo-1-phenyl-1,3-butanedione; Br.C6H4.CO.CH2.CO.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	diox/w	30°C	75%	U		K1=7.00 B2=13.03 K3=4.75	1979Mbc (70438)	722

C10H9O2F		HL					CAS 29681-98-9	(307)	
1-(4-Fluorophenyl)butane-1,3-dione; F.C6H4.CO.CH2.CO.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	diox/w	30°C	75%	U		K1=6.95 K3=4.74 B2=13.01	1979MBc	(70451) 723

 C10H10N03Cl HL CAS 75813-79-5 (1962)
 4-Chloro-N-hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H4.Cl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	none	20°C	0.0	U		K1=6.51 K3=5.53 B2=12.22 B3=17.74	1979KSb	(70511) 724

 C10H10N4O2S HL Sulfadiazine CAS 68-35-9 (1885)
 4-Amino-N-(2-pyrimidinyl)benzenesulfonamide; C4H3N2NHSO2C6H4NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	alc/w	25°C	50%	C	M	K1=7.18 K(Pr(nta)+L)=11.16 B2=12.47	1993EEa	(70619) 725

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

 C10H10O5 HL CAS 13522-48-0 (4722)
 3-Mercapto-1-phenylbut-2-en-1-one; C6H5.CO.CH:CH(C(SH)).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	mixed	30°C	75%	U		K1=3.71 K3=2.97 B2=7.05	1969DNb	(70639) 726

Medium: 75% acetone, 0.1 M NaClO4

 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
Pr+++	gl	diox/w	30°C	75%	U		K1=7.10 K3=4.61 B2=13.23	1979MBc	(70762) 727

Pr+++	gl	alc/w	24°C	80%	U		K1=7.76 K3 = 4.06 B2=13.82	1967DZb	(70763) 728
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Medium: 80% v/v MeOH/H2O, 0.1 M NaCl

Pr+++	gl	alc/w	22°C	100%	U		K1=10.7 K3=4.4 K4=2.6 B2=19.10	1967ZDa	(70764) 729
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Medium: MeOH, 0.1 M NaCl

Pr+++	gl	alc/w	23°C	80%	U		K1=7.76 B2=13.82	1966YDa	(70765) 730
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K3=4.06

K4=2.15

Medium: 80% MeOH, 0.1 M NaCl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	mixed	30°C	67%	U		K1=6.84 K3=5.21	B2=13.09 1964DBb (70766)	731

Medium: 67% acetone, 0.1 M NaCl04

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	none	?	0.0	U		K1=7.02 K3=5.12	B2=13.62 1958DBa (70767)	732

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
Pr+++	gl	NaCl04	25°C	0.10M	M		K1=4.36	B2=7.69 1977HCb (70857)	733

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	nmr	none	25°C	0.0	U		K1=3.00	1977KCC (70858)	734

C10H11NOS L (2831)

Acetothioacetanilide; CH3.CO.CH2.CS.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	diox/w	25°C	50%	U		K1=4.65	B2=8.76 1986NBa (70884)	735

C10H11NO2 L CAS 102-01-2 (250)

Acetoacetanilide; CH3.CO.CH2.CO.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	diox/w	25°C	50%	U		K1=5.20	1986NBa (70913)	736

C10H11NO3 HL (1960)

N-Hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	diox/w	20°C	82%	U		K1=6.54 K3=5.32	B2=12.18 1979KSb (70943)	737

C10H11N5O L CAS 105507-56-0 (8131)

N-Methylisatin-beta-amidinohydrazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	diox/w	30°C	50%	C	TIH	K1=4.65	B2= 8.42 1986SGc (71094)	738

Medium: 50% v/v dioxan/H2O, 0.10 M NaCl04. Data for 0.02-0.20 M NaCl04 and 30-50 C. DH(K1)=45.0 kJ mol-1, DS=237 J K-1 mol-1; DH(K2)=58.3, DS=265

 C10H1102F7 HL CAS 17587-22-3 (1252)
 1,1,1,2,2,3,3-Heptafluoro-7,7-dimethyl-4,6-octanedione;

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

 Pr+++ dis R4N.X 25°C 0.10M U 1970SBa (71113) 739
 B3=18.0
 B(PrL3(OH))=24.0

Medium: Et4NC104

 C10H12N204 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

 Pr+++ gl KNO3 25°C 0.10M U K1=8.53 B2=15.48 1964THa (71272) 740

C10H12N405 HL Inosine CAS 58-63-9 (2344)
 Hypoxanthine-9-beta-D-ribofuranoside;

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

 Pr+++ gl KNO3 35°C 0.10M U M K1=4.21 1987RRc (71402) 741
 B(Pr(gly)L)=9.51
 B(Pr(his)L)=10.45

 C10H12N406 H2L Xanthosine CAS 5968-90-1 (1176)
 3,9-Dihydro-9-ribofuranosyl-1H-purine-2,6-dione;

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

 Pr+++ gl KNO3 35°C 0.10M U M 1987RRc (71499) 742
 K(Pr+HA+HL)=5.10
 K(Pr+HB+HL)=5.65
 K(Pr+HL)=4.24

HA=glycine, HB=histidine.

 C10H1202 HL CAS 1946-74-3 (202)
 3-Isopropyltropolone;

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

 Pr+++ gl diox/w 30°C 50% U M K1=7.54 B2=13.85 1980SGa (71599) 743
 K(Pr(NTA)+L)=5.44

 Pr+++ gl alc/w 24°C 80% U K1=8.3 B2=15.15 1968DZb (71600) 744
 K3=5.5
 K4=4.1

Medium: 80% MeOH, 0.1 M NaCl

Pr+++ sp alc/w ? 3% U K1=6.74 1967GDb (71601) 745
Medium: 3% EtOH, 0.2 M NaClO4

Pr+++ gl alc/w 23°C 80% U K1=8.31 B2=15.19 1966YDa (71602) 746
K3=5.48
K4=4.20

Medium: 80% EtOH, 0.1 M KCl

C10H12O4 HL CAS 5936-18-9 (2743)
2-Hydroxy-3,4-dimethoxyacetophenone; (HO)(CH3)2C6H2.CO.CH3

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

Pr+++ gl diox/w 15°C 50% C T H K1=7.21 B2=13.19 1987GBa (71656) 747
K1(35, 40, 50 C) = 7.30, 6.91, 6.88 respectively. DH(K1)=-43.81 kJ mol⁻¹

C10H12O5 HL CAS 490-64-2 (8492)
2,4,5-Trimethoxybenzoic acid;

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

Pr+++ gl diox/w 25°C 76% M K1=7.16 1978PMa (71675) 748
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

C10H12O5 HL CAS 570-02-5 (8493)
2,4,6-Trimethoxybenzoic acid;

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

Pr+++ gl diox/w 25°C 76% M K1=7.08 1978PMa (71682) 749
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

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

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

Pr+++ gl KNO3 25°C 0.10M C M K1=4.30 2001AAb (72483) 750
*K(PrL)=-5.66
K(2Pr(OH)L=Pr2(OH)2L2)=8.01
B(PrLA)=9.12
B(PrLB)=8.13

B(PrLC)=8.78, B(PrLD)=7.94. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.

C10H14N5O8P H3L GMP-5 CAS 85-32-5 (2947)
Guanosine-5'-monophosphoric acid;

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

Pr+++ gl KNO3 25°C 0.10M C M K1=5.35 2001AAb (72599) 751
 *K(PrL)=-6.20
 K(2Pr(OH)L=Pr2(OH)2L2)=10.30
 B(PrLA)=9.27
 B(PrLB)=8.18

B(PrLC)=9.23, B(PrLD)=7.99. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.

 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
Pr+++	gl	KCl	25°C	0.10M	U			K1=12.30 K(Pr+HL)=6.35	1980MMe (73173)	752
Pr+++	gl	KCl	25°C	0.10M	U			K1=11.30	1979MMe (73174)	753
Pr+++	gl	KNO3	20°C	0.10M	U			K1=13.23	1975DPa (73175)	754
Pr+++	gl	KNO3	30°C	0.10M	U			K1=7.62	1972STc (73176)	755
Pr+++	vlt	KNO3	25°C	0.10M	U			K1=12.96	1971BGb (73177)	756

 C10H16N2O8 H4L EDTA CAS 60-00-4 (120)
 1,2-Diaminoethane-N,N',N'-tetraethanoic acid, Sequestric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	cal	NaClO4	25°C	0.10M	C	H			1987YJa (74081)	757
DH(K1)=-12.5 kJ mol ⁻¹ , DS(K1)=260 J K ⁻¹ mol ⁻¹ .										
Pr+++	gl	KCl	25°C	1.0M	U			K(PrL+H)=1.62	1984BKc (74082)	758
Pr+++	gl	oth/un	25°C	0.50M	U	I		K1=16.00	1984KKb (74083)	759
Pr+++	gl	NaClO4	25°C	0.20M	U			K1=12.15	1984LSd (74084)	760
Pr+++	gl	NaClO4	28°C	0.20M	U			K1=9.96	1982LSa (74085)	761
Pr+++	gl	NaClO4	20°C	0.02M	U	M		K(PrL+PO4)=2.65	1982MPd (74086)	762
Pr+++	sp	KCl	*	0.1M	U			K(Pr+HL)=8.05	1980KKf (74087)	763
room temperature										
Pr+++	vlt	KNO3	20°C	0.10M	U			K1=16.56	1978NLb (74088)	764
Pr+++	gl	NaClO4	25°C	0.50M	U			K1=15.44	1977GGb (74089)	765

Pr+++	sp	none	25°C	0.0	C	K1=13.77	1977HAa (74090)	766
Medium not reported.								
Pr+++	gl	KCl	25°C	1.00M	U	K2=3.35 K(PrL+HL)=2.08 K(2PrL+L)=5.78	1976BKa (74091)	767
Pr+++	sp	KCl	25°C	0.10M	U	K2=3.35 K(2PrL+L)=5.78 K(PrL+HL)=2.08	1975BKa (74092)	768
Pr+++	gl	KNO3	30°C	0.10M	U	M K(PrL+IDA)=2.84 K(PrL+NTA)=4.13 K(PrL+HEDTA)=4.42	1975RTa (74093)	769
Pr+++	EMF	KCl	25°C	0.10M	U	T K(PrL+H)=1.94	1974BKb (74094)	770
Pr+++	gl	KCl	25°C	1.0M	C	K2=3.35 K(PrL+HL)=2.08 K(2PrL+L=Pr2L3)=5.78	1974BKe (74095)	771
Pr+++	gl	KNO3	20°C	0.10M	U	M K(PrL+Citrate)=3.5	1974TDa (74096)	772
Pr+++	gl	KNO3	25°C	0.10M	U	T M K(PrL+HA)=3.10 K(PrL+A)=4.75 K(PrL+HA)(2 C)=3.35, K(35 C)=3.29, K(45 C)=2.90, K(PrL+A):K(2 C)=4.87 K(35 C)=5.10, K(45 C)=4.60, H5A=tripolyphosphoric acid	1973TRb (74097)	773
Pr+++	gl	KNO3	25°C	0.10M	U	T M K(PrL+A)=4.4 K(2 C)=4.6, K(35 C)=4.5, K(45 C)=4.3, H4A=adenosine triphosphate	1973TRb (74098)	774
Pr+++	gl	NaClO4	25°C	0.10M	U	M K(PrL+A)=6.14, H4A=tiron	1969AIb (74099)	775
Pr+++	dis	oth/un	25°C	?	U	K1=16.23 Method: paper electrophoresis. Medium: pH=1.86	1969PJa (74100)	776
Pr+++	ix	KCl	25°C	0.10M	U	H K1=15.76 DH(K1)=-3.4 kJ mol ⁻¹ , DS=289 J K ⁻¹ mol ⁻¹	1959BDb (74101)	777
Pr+++	gl	oth/un	20°C	0.10M	U	K1=16.17 Ploarography also used	1955WSa (74102)	778
Pr+++	gl	KCl	20°C	0.10M	U	I T K1=16.16	1954SGa (74103)	779

By polarography, 0.1 M KNO₃, K₁=16.21 or 16.40

Pr+++ gl KCl 20°C 0.10M U I T K₁=15.75 1953WSa (74104) 780
By polarography, 0.1 M KNO₃, K₁=15.8

Pr+++ gl KCl 20°C 0.10M U K₁=16.55 1952VIa (74105) 781

C10H16N5O13P3 H4L ATP CAS 56-65-5 (403)
Adenosine-5'-triphosphoric acid;

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

Pr+++ gl NaClO₄ 20°C 0.20M U T H K₁=7.13 B₂=10.76 1993VLa (74808) 782
K(Pr(NTA)+L)=3.97
K(Pr(EDTA)+L)=3.80
Data for 30, 40 C. DH(K₁)=5.7 kJ mol⁻¹, DS(K₁)=156 J K⁻¹ mol⁻¹. DH(K₂)=
16.3, DS(K₂)=125; DH(Pr(NTA)+L)=18.2, DS=138; DH(Pr(EDTA)+L)=20.1, DS=141.

Pr+++ gl KCl 25°C 0.10M U K₁=6.53 B₂=10.48 1988SSd (74809) 783
K(Pr+HL)=4.31

Pr+++ kin oth/un 25°C 0.05M C K₁=6.51 1983Mcc (74810) 784
Method: inhibition of the hexokinase reaction, pH 8.0 (0.05 M TAPS).

Pr+++ gl KNO₃ 35°C 0.10M U M 1972TRc (74811) 785
K(Pr(EDTA)+L)=4.5

C10H16O2 HL CAS 100563-25-5 (4706)
2-Butanoylcyclohexanone; CH₃.CH₂.CH₂.CO.C₆H₉O

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

Pr+++ gl oth/un 30°C 0.10M U K₁=9.20 B₂=17.73 1972DSe (74924) 786
K₃=8.02

C10H17N3O6S H3L Glutathione CAS 70-18-8 (333)
Glutamyl-cysteinyl-glycine;

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

Pr+++ gl NaClO₄ 25°C 0.10M U TIH K₁=6.880 2003GSb (75140) 787
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=7.980. DH(K₁)=-31.2 kJ mol⁻¹, DS(K₁)=-48.

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

Pr+++ gl NaClO₄ 25°C 0.50M U K₁=14.17 1977GGb (75475) 788

 Pr+++ EMF KCl 25°C 1.0M U K2=3.40 1977GMa (75476) 789
 K(PrL+HL)=1.65
 K(PrL+H2L)=0.94
 K(PrL+H4L)=2.55

Method: Pt/H2 electrode.

 Pr+++ gl NaClO4 25°C 1.0M U K2=2.80 1973NMa (75477) 790
 K(PrL+HL)=1.93
 K(PrL+H2L)=1.57
 K(PrL+H3L)=1.74

 Pr+++ gl oth/un 20°C ? U K(PrL+HL)=1.42 1971MNa (75478) 791
 K(PrL+L)=3.28

 Pr+++ gl KNO3 25°C 0.10M U M K(PrL+A)=3.84 1963TLb (75479) 792
 K(PrL+B)=4.20
 K(PrL+C)=3.43

H2A=iminodiethanoic acid, H2B=hydroxyethyliminodiethanoic acid,
 H2L=diaminoethane-N,N'-diethanoic acid

 Pr+++ EMF oth/un 20°C 0.10M U K1=14.96 1962PMa (75480) 793

 Pr+++ gl KNO3 15°C 0.10M U T H K1=14.77 1961MFb (75481) 794
 K1=14.68(20 C), 14.61(25 C), 14.54(30 C), 14.58(35 C), 14.47(40 C)
 DH(K1)=-18.6 kJ mol⁻¹(25 C), DS=218 J K⁻¹ mol⁻¹

 Pr+++ gl KNO3 25°C 0.10M U K1=14.39 1956SPa (75482) 795

 C10H18O4 H2L Sebacic acid CAS 111-20-6 (3308)
 Decanedioic acid; HOOC.(CH2)8.COOH

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

 Pr+++ gl KNO3 25°C 0.20M U M K(Pr(nta)+L)=6.18 1990KMF (75605) 796
 K(Pr(hedta)+L)=6.08
 K(Pr(cdta)+L)=5.88
 K(Pr(dtpa)+L)=5.44

hedta is N-(hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid.

 Pr+++ gl oth/un 20°C 0.10M U Kso=-26.00 1960WKA (75606) 797

 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

Pr+++ gl KNO3 25°C 0.10M U T H K1=3.23 1981SGf (75695) 798
Data for 35 and 45 C. DH(K1)=2.8 kJ mol⁻¹, DS(K1)=71 J K⁻¹ mol⁻¹.

C10H2005 L 15-Crown-5 CAS 33100-27-5 (576)
1,4,7,10,13-Pentaoxacyclopentadecane; cyclo(-(O.CH2.CH2)5-)

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

Pr+++ cal non-aq 25°C 100% U H K1=4.45 1993LLa (76111) 799
Medium: MeCN. DH(K1)=-28.3 kJ mol⁻¹.

Pr+++ dis non-aq 25°C 100% U B2=8.18 1990NIa (76112) 800
B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate

Pr+++ gl non-aq 25°C 100% C K1=6.97 B2=10.28 1989BPa (76113) 801
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

Pr+++ ISE non-aq 25°C 100% C K1=6.22 1983ANb (76114) 802
The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4

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

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

Pr+++ ISE non-aq 30°C 100% C T H K1=13.5 1986ALa (76338) 803
Medium: propylene carbonate, 0.1M Et4NClO4. DH and DS given

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

Pr+++ ISE non-aq 25°C 100% C K1=5.40 1986BDa (76469) 804
Medium: propylene carbonate, 0.1 M Et4NClO4

C11H8O3 H2L CAS 86-48-6 (1129)
1-Hydroxy-2-naphthoic acid;

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

Pr+++ gl diox/w 25°C 75% U K1=4.96 1975DJa (77016) 805

C11H8O3 L CAS 1133-72-8 (2614)
2-Aceto-1,3-indandione;

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

Pr+++ gl diox/w 30°C 75% U T K1=4.25 B2=8.13 1984APa (77041) 806

Pr+++ gl mixed 22°C 60% U K1=3.76 B2=7.15 1979JMa (77042) 807
K3=3.01

Medium: 60% acetone/H2O

C11H8O3 H2L CAS 2083-08-1 (1131)

2-Hydroxy-1-naphthoic acid;

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

Pr+++ gl diox/w 25°C 75% U K1=5.48 1975DJa (77064) 808

C11H8O3 HL CAS 483-35-6 (3347)

2-Hydroxy-3-methyl-1,4-naphthoquinone;

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

Pr+++ gl diox/w 35°C 75% M K1=4.52 B2=7.93 1986SSc (77077) 809

C11H8O3 H2L CAS 92-70-6 (1130)

2-Hydroxy-3-naphthoic acid (3-Hydroxy-2-naphthoic acid);

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

Pr+++ gl diox/w 20°C 50% U T K1=8.19 B2=15.94 1977SKf (77129) 810

B3=23.79

K3=7.85

Pr+++ gl diox/w 25°C 75% U K1=5.49 1975DJa (77130) 811

C11H8O4 HL CAS 7555-37-5 (4812)

3-Acetyl-4-hydroxycoumarin

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

Pr+++ gl diox/w 35°C 50% U K1=3.47 B2=6.06 1971MAa (77183) 812

Medium: 50% dioxan, 0.01 M NaClO4

C11H8O4 HL CAS 6724-42-1 (6183)

8-Formyl-7-hydroxy-4-methyl-2H-1-benzopyran-2-one; CH0.C9H30(:O)(CH3)(OH)

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

Pr+++ gl diox/w 30°C 50% U TI M K1=4.74 B2=8.31 1985ECa (77206) 813

K3=2.35

20 C: K1=5.09, K2=3.96, K3=2.62; 40C: K1=4.41, K2=3.20, K3=2.10

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
Pr+++	gl	NaClO4	25°C	0.10M	C			K1=7.41 B2=12.56 K(Pr+HL)=1.69	1979LAb (77232)	814

 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
Pr+++	cal	NaClO4	25°C	0.10M	C	H		K1=7.61 B2=12.7 K(Pr+HL)=2.06	1986LLc (77285)	815

DH(Pr+HL)=2.1 kJ mol⁻¹, DS=46 J K⁻¹ mol⁻¹

 C11H9NO2 H2L CAS 7470-09-9 (8481)
 2-Hydroxy-1-naphthaldoxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	diox/w	25°C	75%	U			K1=7.78	1978Mcd (77318)	816

Medium: 75% v/v dioxane/H2O, 0.10 M NaClO4.

 C11H9NO4 H2L CAS 4321-82-7 (4829)
 3-Acetyl-4-hydroxycoumarin oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	diox/w	35°C	50%	U			K(Pr+HL)=3.31 K(Pr+2HL)=5.79	1971MAa (77426)	817

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
Pr+++	sp	NaNO3	25°C	0.10M	C			K1=9.78 K(Pr+HL)=3.95 *K(PrHL)=-6.47	19840Ha (77574)	818

Medium pH 4.8-6.3.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	sp	KCl	20°C	0.10M	U			K(Pr+HL)=3.35	1971EKa (77575)	819
Pr+++	sp	NaClO4	20°C	0.10M	U			K1=9.3 K(Pr+HL)=10.5	1967SNb (77576)	820

 C11H9N3O3 HL HNQS CAS 62331-38-8 (6194)
 2-Hydroxy-1,4-naphthoquinone monosemicarbazone; C10H5(OH)(O):N.NH.CO.NH2

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  diox/w 35°C 75% U TI      K1=4.54  B2=8.22  1987SSb (77613) 821
At I=0.1 M. At 35 C,I=0.05, K1=4.73,K2=4.25; I=0.01, K1=5.34, K2=4.47,
At 40 C, I=0.1 M, K1=4.24, K2=3.39; at 45 C, I=0.1 M, K1=4.41, K2=3.27
*****
C11H10N4O3          HL                      CAS 92265-24-2 (6211)
5-(2'-Methylphenylazo)barbituric acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  diox/w 25°C 75% U          K1=4.56  B2=8.77  1986MIa (77733) 822
*****
C11H10N4O4          HL                      CAS 92265-26-4 (6210)
5-(2'-Methoxyphenylazo)barbituric acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  diox/w 25°C 75% U          K1=4.86  B2=9.44  1986MIa (77747) 823
*****
C11H11N3O2S        HL      Sulfapyridine      CAS 144-83-2 (8356)
4-Amino-N-2-pyridinyl-benzenesulfonamide;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  alc/w 25°C 50% C    M    K1=9.71          1993EEa (77934) 824
                               K(Pr(nta)+L)=4.53
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
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  NaClO4 25°C 0.10M U TIH    B2=12.57          1986GSb (78021) 825
35 C: B2=12.95; 45 C:B2=13.10. DH(B2)=-48.1 kJ mol-1, DS=92 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
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  KNO3   35°C 0.10M U          K1=5.10          1990RSe (78231) 826
-----
Pr+++     gl  KCl    25°C 0.10M U T H          K1=4.52          1976BFc (78232) 827
For 55C K1= 4.00
*****
C11H12N2O5S        HL                      CAS 56475-09-3 (8410)
3-(4'-Sulfophenylhydrazo)-pentane-2,4-dione;
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Pr+++ gl oth/un 30°C 0.10M U B2=21.21 1985EEb (78326) 828
Medium: not stated. For 3'-sulfo-phenylhydrazo-, B2=21.47; for 2'-sulfo-phenylhydrazo-, B2=23.76; for 4'-methyl-2'-sulfo-phenylhydrazo-, B2=22.59.

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

Pr+++ gl alc/w 25°C 50% C K1=10.77 B2=20.42 1993EEa (78360) 829
K(Pr(nta)+L)=4.53
Medium: 50% v/v EtOH/H2O, 0.10 M NaClO4.

C11H12O2 HL CAS 4023-79-4 (305)
1-(4-Methylphenyl)butane-1,3-dione; CH3.C6H4.CO.CH2.CO.CH3

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

Pr+++ gl diox/w 30°C 75% U K1=7.25 B2=13.48 1979MBc (78376) 830
K3=4.58

C11H12O3 HL CAS 94-02-0 (3351)
Ethyl benzoylacetate; C6H5.CO.CH2.CO2.C2H5

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

Pr+++ gl mixed 25°C 75% U K1=7.90 B2=14.68 1971DRa (78403) 831
Medium: 75% acetone, 0.1 M NaClO4

C11H13NO3 H2L CAS 63467-38-9 (1961)
4-Methyl-N-hydroxyacetanilide; CH3.CO.CH2.CO.N(OH).C6H4.CH3

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

Pr+++ gl diox/w 20°C 82% U K1=6.63 B2=12.30 1979KSb (78500) 832
K3=5.29

C11H13NO3 H2L CAS 67777-63-3 (8480)
N-[1-(2-Hydroxyphenyl)ethylidene]-beta-alanine;

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

Pr+++ gl NaClO4 25°C 0.10M U TI K1=8.31 B2=14.96 1978MSj (78528) 833
Also data for 30 and 35 C and 0.01 and 0.05 M NaClO4.

C11H13NO4 L CAS 15658-60-3 (4587)
Diethyl 2,6-pyridinedicarboxylate; Dipicolinic acid diethyl ester;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      sp non-aq 20°C 100% C          K1=6.9      B2=13.00    1997RPa (78536) 834
                                         B3=16.6

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Medium: acetonitrile.

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*****
C11H13NO4S          HL          CAS 58943-48-9 (1411)
N-Acetylacetylidene-orthanilic acid; HO3S.C6H4.N:C(CH3).CH2.CO.CH3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      EMF NaClO4 25°C 0.10M U      K1=17.90    1982MSc (78595) 835
*****
C11H13NO5          H3L      HBIDA          CAS 7372-13-6 (1603)
N-(2-Hydroxybenzyl)iminodiethanoic acid; HO.C6H4.CH2.N(CH2.COOH)2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  KNO3   25°C 0.10M C          K1=12.21   B2=21.20    1989YSa (78636) 836
                                         K(Pr+HL)=5.63
                                         K(Pr+2HL)=11.76
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Pr+++      gl  KNO3   20°C 0.10M U      K1=12.92   B2=21.71    1983MSc (78637) 837
*****
C11H13NO6          H4L          CAS 59036-09-8 (2111)
2,5-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      sp oth/un 25°C   ?  U          K(Pr+HL)=16.00    1974VKa (78682) 838
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*****
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
-----
Pr+++      gl  KNO3   25°C 0.10M U      K1=6.18    B2=10.42    1964THa (78891) 839
*****
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
-----
Pr+++      gl  KNO3   20°C 0.10M U      K1=12.03    1981NSc (79325) 840
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Pr+++      EMF KNO3   25°C 0.10M U      K1=15.29    1980KBc (79326) 841
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Pr+++      vlt KNO3   20°C 0.10M U      K1=16.97    1978NLb (79327) 842
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 Pr+++ vlt KNO3 20°C 0.10M U K1=17.17 1964ICb (79328) 843

 C11H18N2O8 H4L CAS 38539-29-0 (2573)
 1,3-Diaminopropane-N,N'-di(1,4-butanedioic acid)

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

Pr+++ gl KNO3 25°C 0.10M U K1=9.26 1976GKd (79371) 844

 C11H18N2O8 H4L CAS 4408-81-5 (923)
 1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.)2.CH2

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

Pr+++ EMF KNO3 20°C 0.10M U H K1=11.99 1971AWa (79466) 845
 DH=16.4 kJ mol⁻¹, DS=284.7 J K⁻¹ mol⁻¹.

 C11H18N2O9 H4L HDPTA CAS 3148-72-9 (431)
 1,3-Diamino-2-hydroxypropane-N,N,N',N'-tetraethanoic acid;

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

Pr+++ gl KNO3 25°C 0.10M M K1=12.57 1986PLc (79571) 846

 C11H18N2O9 H4L CAS 668-21-1 (2562)
 2-Hydroxy-1,3-diaminopropane-N,N'-di(1,4-butanedioic) acid

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

Pr+++ gl KNO3 25°C 0.10M U K1=9.86 1976GKd (79602) 847

 C11H18O2 HL CAS 40072-58-3 (4820)
 2-(3'-Methylbutanoyl)cyclohexanone (2-isovaleryl cyclohexanone);

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

Pr+++ gl mixed 30°C 75% U K1=9.43 B2=17.94 1972DSd (79656) 848
 K3=7.62

Medium: 75% acetone

 C11H18O2 HL CAS 5601-52-5 (4821)
 2-Butanoyl-6-methylcyclohexanone (2-butyryl-6-methylcyclohexanone);

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

Pr+++ gl mixed 30°C 75% U K1=10.40 B2=19.70 1972DSd (79667) 849
 Medium: 75% acetone

 C11H22O5 L 16-Crown-5 CAS 55477-28-8 (1592)

1,4,7,10,13-Pentaoxacyclohexadecane; cyclo(-(O.CH2.CH2)5.CH2.CH2-)

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

Pr+++ cal non-aq 25°C 100% U H K1=2.76 1993LLa (79869) 850
 Medium: MeCN. DH(K1)=-35.8 kJ mol⁻¹.

C11H26N2O6 L Bistris-propane CAS 64431-96-5 (7920)
 1,3-Bis[tris(hydroxymethyl)methylamino]propane;

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

Pr+++ gl NaClO4 25°C 0.10M C 2001GYb (79958) 851
 K(2Pr+20H+2L)=20.80
 K(2Pr+40H+2L)=31.66
 K(2Pr+50H+2L)=36.14

C12H7O2F7 L (6994)
 1-Heptafluoropropyl-3-phenylpropane-1,3-dione; C3F7.CO.CH2.CO.C6H5

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

Pr+++ gl alc/w 22°C 80% U K1=6.38 B2=11.89 1995MTa (80189) 852
 K3=5.49

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

Pr+++ dis non-aq 25°C 100% C HM 1998YHa (80509) 853
 K(PrA3+L)=7.27

Method: solvent extraction from 0.10 M NaClO4 into CHCl3. HA is
 1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedione. DH(PrA3+L)=7 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

Pr+++ gl alc/w 25°C 50% C T H K1=4.26 B2= 7.49 1997GSa (80589) 854
 Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=3.92, K2=2.97.
 DH(K1)=-25 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

Pr+++ gl alc/w 25°C 50% C T H K1=5.15 B2= 9.17 1997GSa (80676) 855
K3=2.97

Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=4.74, K2=3.71,
K3=2.74. DH(K1)=-30 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

Pr+++ gl alc/w 25°C 50% C K1=6.56 B2=12.26 1997GSa (80686) 856

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

Pr+++ gl alc/w 25°C 50% C K1=6.32 B2=11.49 1997GSa (80744) 857

Medium: 50% v/v EtOH/H2O, 0.20 M KCl.

C12H10N6O4S H2L CAS 77327-19-6 (8343)

2-[4-Amino-3-(1,2,4-triazolylazo)]naphthol-4-sulphonic acid;

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

Pr+++ gl NaClO4 30°C 0.10M U T H K1=6.71 B2=12.00 1982Gmb (80786) 858

Data for 40 and 50 C. Also DH and DS values.

C12H11N3OS HL (6787)

2-Hydroxy-1-naphthaldehyde thiosemicarbazone;

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

Pr+++ gl diox/w 20°C 75% U I K1=7.36 B2=12.94 1992SSc (80894) 859

Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4

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

Pr+++ gl diox/w 20°C 75% U I K1=8.292 B2=15.192 1992SSc (80923) 860

Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4

C12H12N3O3Cl 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

Pr+++ sp NaClO4 25°C 0.50M U K1=2.070 1987MSa (80973) 861

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

Pr+++ gl alc/w 22°C 0.1M U K1=6.25 B2=11.75 2000TBb (81080) 862
K3=4.15

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

Pr+++ sp NaClO4 25°C 0.50M U K1=2.173 1987MSa (81203) 863

C12H16O7S HL CAS 204931-01-1 (7817)
2,3-Benzo-1,4,7,10-tetraoxacyclododeca-2-ene-4'-sulfonic acid;

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

Pr+++ dis R4N.X 25°C 0.12M C K1=2.30 1998SUa (81700) 864

Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

C12H18N2O5S H2L CAS 80459-15-0 (1595)
2-Nitroso-5-(N-propyl-3-sulfopropylamino)phenol;

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

Pr+++ gl KNO3 25°C 0.10M C K1=5.61 1988YSa (81817) 865

C12H18N2O8 H2L CAS 93031-52-8 (5829)
1,4-Dioxa-7,10-diazacyclododecane-5,12-dione-7,10-diethanoic acid;

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

Pr+++ gl R4N.X 25°C 0.10M C K1=5.92 1988CCb (81842) 866

C12H18N2O8 H4L CAS 76079-31-7 (2587)
trans-1,2-Diaminocyclohexane-N,N'-di(propanedioic acid)

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

Pr+++ EMF KNO3 25°C 0.10M U K1=13.29 1985SGa (81875) 867

Pr+++ EMF KNO3 25°C 0.10M U K1=14.59 B2=18.69 1980SGb (81876) 868

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

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

Pr+++ vlt KNO3 20°C 0.10M U K1=17.49 1968NLa (82032) 869

C12H20N2O8 H4L CAS 40623-42-5 (1101)
1,2-Diaminoethane-N,N'-di(2-pentane-1,5-dioic acid); (CH2NHCH(COOH)CH2CH2COOH)2

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

Pr+++ gl KNO3 20°C 0.10M U K1=7.71 1975DPa (82092) 870

Pr+++ gl KNO3 25°C 0.10M U K1=7.21 1973GBd (82093) 871

Pr+++ gl KNO3 30°C 0.10M U K1=7.22 1972STc (82094) 872

C12H20N2O8 H4L CAS 61368-60-3 (3389)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-propanoic acid;

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

Pr+++ vlt KNO3 20°C 0.10M U K1=17.76 1976NKa (82142) 873

C12H20N2O8 H4L CAS 40623-42-5 (3388)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-dipropanoic acid;

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

Pr+++ gl NaClO4 25°C 0.10M U IH K1=11.94 1988RNa (82176) 874
B(Pr+HL)=5.99
DH(K1)=-2.39 kJ mol⁻¹, DH(Pr+HL)=21.9, DS(K1)=221 J K⁻¹ mol⁻¹

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

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

Pr+++ sp NaClO4 20°C 0.10M U K1=17.39 1971ISa (82327) 875

Pr+++ vlt oth/un 20°C 0.10M U K1=17.49 1966DMa (82328) 876

Pr+++ vlt KNO3 20°C 0.10M U K1=17.49 1966NSb (82329) 877

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	sp	NaClO4	20°C	0.10M	U			K1=16.10	1971ISa (82415)	878
Pr+++	vlt	oth/un	20°C	0.10M	U			K1=15.81	1966DMa (82416)	879

C12H20N2O8S H4L TEDTA CAS 923-74-0 (3394)										
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
Pr+++	gl	KNO3	25°C	0.10M	C			K1=13.97	1985TPa (82472)	880

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
Pr+++	EMF	KNO3	20°C	0.10M	U			K1=17.36	1962MMc (82560)	881

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
Pr+++	vlt	KNO3	20°C	0.10M	C			K1=16.49	1978NLa (82679)	882

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
Pr+++	vlt	KNO3	20°C	0.10M	U			K1=10.40	1985LBc (82703)	883

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
Pr+++	gl	R4N.X	25°C	0.10M	C			K1=12.00	1998CCb (83091)	884

C12H24O6 L 18-Crown-6 CAS 17455-13-9 (577)										
1,4,7,10,13,16-Hexaoxacyclooctadecane;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	sp	non-aq	25°C	100%	C			K1=1.90	2003ZRa (83582)	885
Medium: DMSO. Method: competition with murexide.										

Pr+++ dis R4N.X 25°C 0.12M C K1=1.11 1998SUa (83583) 886
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

Pr+++ dis non-aq 25°C 100% U B(PrPL)=6.95 1993INa (83584) 887
B(PrPL2)=8.73

K is the equilibrium constant for extraction of the metal picrate (P) into CH2Cl2. For extraction from D2O, B=7.41 and 9.27.

Pr+++ cal non-aq 25°C 100% U IH K1=3.70 1993LLa (83585) 888
Medium: MeCN. DH(K1)=-44.0 kJ mol-1. In MeOH K1=2.63, DH(K1)=18.7

Pr+++ dis non-aq 25°C 100% U B2=8.73 1990NIa (83586) 889
B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate

Pr+++ sp alc/w 25°C 100% U K1eff=3.60 1989OKb (83587) 890

At pH 3.4 by competition with 18-crown-6. Medium: MeOH, 0.03 M Et4NClO4

Pr+++ ISE non-aq 25°C 100% C K1=8.60 1983ANb (83588) 891
The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4

Pr+++ cal alc/w 25°C 100% U H K1=2.63 1977ILb (83589) 892
Medium: Methanol. DH=18.7 kJ mol-1.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pr+++	ISE	non-aq	25°C	100%	C T H			K1=16.1	1986ALa (83884)	893
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Medium: propylene carbonate, 0.1 M Et4NClO4. DH and DS given

Pr+++ gl alc/w 25°C 100% C I K1=7.94 1983ANb (83885) 894
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4
In propylene carbonate, 0.1 M Et4NClO4, K1=14.5

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
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Pr+++	gl	non-aq	25°C	100%	C			K1=5.19	1989BPa (84017)	895
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Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

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
Pr+++	gl	R4N.X	25°C	0.10M	U			K1=13.98 K(Pr+HL)=10.45 K(Pr+H2L)=5.14	1996BJa (84163)	896

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
Pr+++	gl	NaCl	20°C	0.10M	C			K1=10.0	1988SJB (84351)	897

C13H50F13S 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
Pr+++	gl	alc/w	22°C	80%	U			K1=5.56 B2=10.57 K3=4.10	1995MTa (84460)	898

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

C13H8O3 H2L CAS 18931-22-1 (2913)
peri-Dihydroxynaphthindenone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	sp	alc/w	25°C	50%	U			K1=9.53	1982HMa (84506)	899

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
Pr+++	gl	NaClO4	30°C	0.10M	U			K1=5.29	1989SHa (84518)	900

C13H9N2O4Cl HL CAS 36016-30-5 (182)
N-(4-Chlorophenyl)-3-nitrobenzohydroxamic acid; 02N.C6H4.CO.N(C6H4Cl).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	diox/w	35°C	50%	A			K1=7.41 B2=13.32 K3=4.89	1977AKa (84605)	901

C13H9N3OS L (6217)
Acenaphthenequinone Monothiosemicarbazone; C12H6O:N.NH.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pr+++ gl diox/w 25°C 75% U TI K1=8.77 B2=16.52 1986SSd (84624) 902
Medium: 0.1 M NaClO4. 30 C: K1=8.82, K2=8.26; 40 C: K1=8.47, K2=7.79; 50 C:
K1=8.32, K2=7.18; I=0.01 M: K1= 9.45, K2=8.91; I=0.05: K1=9.03, K2=8.47

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

Pr+++ gl alc/w 25°C 70% U K1=12.34 B2=23.41 1995IFa (85047) 903
Medium: 70% v/v EtOH/H2O, 0.10 M NaCl.

C13H11NO2 H2L CAS 78-75-2 (6258)
3-(Salicylideneamino)phenol; HO.C6H4.CH:N.C6H4.OH

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

Pr+++ gl alc/w 25°C 50% U K1=6.15 B2=3.6 1977DWa (85088) 904

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

Pr+++ dis KCl RT 0.10M C 1996KNa (85172) 905
Method: extraction into benzene from 0.10 M KCl (pH 7.0; borate buffer).
K(Pr+3HL(org))=PrL3(org)+3H)=-15.50

Pr+++ gl diox/w 35°C 50% A K1=10.61 B2=19.72 1977AKa (85173) 906
K3=8.08

Pr+++ gl mixed 25°C 75% U K1=7.70 B2=13.90 1969DSb (85174) 907
K3=5.0

Medium: 75% acetone, 0.1 M NaClO4

C13H11NO4S H2L CAS 124452-52-4 (8496)
2-[(Phenylimino)methyl]phenol 4-sulfonic acid;

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

Pr+++ gl NaClO4 25°C 0.10M U T HM K1=4.75 1995SSd (85208) 908
K(Pr(bpy)+L)=3.71
K(Pr(phen)+L)=3.63
K(Pr(his)+L)=3.82

Data for 35 and 45 C. DH and DS values reported.

C13H11NS HL CAS 42152-36-3 (8401)
2-[(Phenylmethylene)amino]benzenethiol;

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

Pr+++ gl alc/w 25°C 70% U K1=8.43 B2=16.37 1995IFa (85232) 909
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

Pr+++ gl diox/w 30°C 75% U K1=8.33 B2=15.25 1988ESb (85252) 910

C13H12N2O HL CAS 59129-92-9 (9080)
N-2-(5-Methylpyridyl)salicylaldimine;

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

Pr+++ gl alc/w 25°C 50% C T H K1=7.14 B2=12.06 1997GSa (85344) 911
K3=4.40

Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=6.57, K2=4.54,
K3=4.06. DH(K1)=-42 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

Pr+++ gl oth/un 25°C 0.10M U K1=12.769 1987KSc (85364) 912

C13H12N4O L Diphenylcarbаз. CAS 538-62-5 (1195)
Diphenylcarbазone; C6H5.NH.NH.CO.N:N.C6H5

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

Pr+++ EMF alc/w 20°C 50% U K1=3.30 1971MAc (85417) 913
Medium: 50% EtOH, 0.1 M NaClO4

C13H12N4S L Dithizone CAS 60-10-6 (1801)
Diphenylthiocarbазone; C6H5.NH.NH.CS.N:N.C6H5

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

Pr+++ EMF alc/w 20°C 50% U K1=1.65 1971MAc (85472) 914
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)

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Pr+++      gl  diox/w 30°C 75% U          K1=10.50 B2=19.58 1988ESb (85615) 915
*****
C13H15N06          H3L                      (4999)
2-Benzylnitriлотriethanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      oth oth/un 25°C 0.10M U          K1=11.3 B2=19.27 1962HKa (85742) 916
*****
C13H17N3O5          H2L Tyr-Gly-Gly          CAS 21778-69-8 (863)
Tyrosyl-glycyl-glycine; H2N.CH(CH2.C6H4.OH).CO.NH.CH2.CO.NH.CH2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  KNO3 25°C 0.10M U T H          1981SGf (86025) 917
                               K(Pr+HL)=3.45
Data for 35 and 45 C. DH(Pr+HL)=5.4 kJ mol-1, DS(Pr+HL)=84 J K-1 mol-1.
*****
C13H19N03          H2L                      (2031)
2-(1-(2-Hydroxyphenyl)-ethylimine)-3-methylbutanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  NaClO4 25°C 0.10M U TIH          K1=9.40 B2=17.15 1980SSc (86058) 918
*****
C13H20N2O8          H4L                      CAS 123064-92-6 (7929)
trans-1,3-Cyclopentanediaminotetraethanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Pr+++      gl  KCl 25°C 1.0M U          K1=11.69          1989CMB (86126) 919
                               K(PrHL+H)=3.82
                               K(PrL+H)=4.73
*****
C13H20N6O5          HL Asp-Ala_HisNH2          CAS 83354-03-4 (8246)
Aspartyl-alanyl-histidinamide;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  KCl 25°C 0.50M U          1982AGa (86143) 920
                               K(Pr+H2L)=0.60
                               K(Pr+HL)=2.30
*****
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
Pr+++	gl	KNO3	25°C	0.10M	C		K1=9.71 K(Pr+HL)=6.45	1982PPd (86204)	921

C13H22N2O8			H4L				CAS 1198-14-7	(5004)	
1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)2NCH2CH(C3H7)N(CH2COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	vlt	KNO3	20°C	0.10M	U		K1=17.48	1974NLa (86234)	922

C13H22N2O8			H4L				(7164)		
2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)2NCH(CH3)CH2CH(CH3)N(CH2COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	KNO3	20°C	0.10M	U		K1=11.15	1981NSc (86262)	923

C13H22N2O8			H4L				(5003)		
3-Methyl-1,2-diaminobutane-N,N,N',N'-tetraethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	vlt	KNO3	20°C	0.10M	U		K1=17.28	1968NLb (86289)	924

C13H22N2O9			H4L		DETAP		CAS 36829-96-6	(5602)	
Bis(2-aminoethyl)ether-N,N,N'-triethanoic acid-N'-(3-propanoic acid);									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	KNO3	25°C	0.10M	C		K1=14.61 K(Pr+HL)=9.21	1985PLa (86309)	925

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	cal	non-aq	25°C	100%	C	H	K1=2.28	1998LBc (86484)	926
Medium: acetonitrile. DH(K1)=-16.32 kJ mol ⁻¹ , DS(K1)=-11.1 J K ⁻¹ mol ⁻¹ .									

C14H8O4			H2L		Alizarin		CAS 72-48-0	(1058)	
1,2-Dihydroxyanthraquinone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	oth/un	25°C	0.10M	U		K1=11.76	1981EIa (86648)	927

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

Pr+++ gl NaCl04 25°C 0.20M U M K1=10.07 1987Vsa (86752) 928
K(Pr(cdta)+L)=5.36, K(Pr(dtpa)+L)=5.21.

Pr+++ gl NaCl04 25°C 0.20M U M K1=10.09 1984LSe (86753) 929
K(Pr(edta)+L)=8.12
B(Pr(edta)L)=20.37

C14H9NO3 HL CAS 116-85-8 (1020)
1-Amino-4-hydroxyanthraquinone;

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

Pr+++ sp oth/un 30°C ? U K1=5.39 1972Jaa (86797) 930

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

Pr+++ gl diox/w 25°C 70% U K1=5.98 B2=11.85 1996DAb (86852) 931
Medium: 70% dioxane/H2O, 0.10 M NaCl04.

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

Pr+++ gl NaCl04 30°C 0.10M U K1=5.22 1989SHa (86888) 932

C14H11N3O HL CAS 24854-76-0 (1380)
2-(1H-Benzimidazol-2-yl-methylene-amino) phenol;

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

Pr+++ gl diox/w 25°C 50% U K1=7.32 B2=13.83 19820Ca (86996) 933

C14H11N5 L CAS 7014-08-6 (8461)
1,5-Diphenyl-3-cyanoformazan;

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

Pr+++ gl diox/w 25°C 70% U K1=7.03 B2=14.01 1996DAb (87002) 934
Medium: 70% dioxane/H2O, 0.10 M NaCl04.

C14H12NO2Br HL CAS 13664-21-6 (6243)
N-(4-Tolyl)-4'-bromobenzohydroxamic acid; Br.C6H4.CO.N(C6H4.CH3).OH

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

Pr+++ gl diox/w 25°C 50% U T H K1=9.40 B2=17.30 1983AGb (87049) 935
K3=6.90
35 C: K1=8.90, K2=7.40, K3=6.39

C14H12NO2Cl HL CAS 32939-57-4 (6242)
N-(4-Tolyl)-4'-chlorobenzohydroxamic acid; Cl.C6H4.CO.N(C6H4.CH3).OH

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

Pr+++ gl diox/w 25°C 50% U T H K1=9.43 B2=17.36 1983AGb (87075) 936
K3=6.92
35 C: K1=8.92 K2=7.43, K3=6.42

C14H12NO2F HL CAS 13664-15-8 (6241)
N-(4-Tolyl)-4'-fluorobenzohydroxamic acid; F.C6H4.CO.N(C6H4.CH3).OH

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

Pr+++ gl diox/w 25°C 50% U T H K1=9.72 B2=17.95 1983AGb (87084) 937
K3=7.22
35 C: K1=9.21 K2=7.22, K3=6.71

C14H12N2O2 HL (6311)
4-Hydroxy-3-formyl-2'-methylazobenzene; (HO)(CHO)C6H3.N:N.C6H4.CH3

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

Pr+++ gl alc/w 28°C 60% U K1=5.22 B2=9.14 1976WPb (87178) 938
B3=12.69
Data also for 4'-methyl analogue. K1=5.10, K2=3.92, B3=12.52

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

Pr+++ gl diox/w 25°C 50% U I K1=3.46 B2=6.16 1985ANa (87222) 939

C14H12N2O4 HL CAS 29556-26-1 (6244)
N-(4-Tolyl)-4'-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH

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

Pr+++ gl diox/w 25°C 50% U T H K1=9.11 B2=16.71 1983AGb (87245) 940
K3=6.59

35 C: K1=8.60, K2=7.10, K3=6.08

C14H12N2O4 HL CAS 854-7-78-9 (183)
N-2-Tolyl-3-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH

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

Pr+++ gl diox/w 35°C 50% A K1=8.72 B2=15.93 1977AKa (87253) 941
K3=6.20

C14H12N2O4 HL (179)
N-3-Tolyl-3-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH

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

Pr+++ gl diox/w 35°C 50% A K1=8.91 B2=16.31 1977AKa (87265) 942
K3=6.39

C14H12N2O4 HL CAS 85407-74-5 (180)
N-4-Tolyl-2-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH

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

Pr+++ gl diox/w 35°C 50% A K1=9.16 B2=16.81 1977AKa (87278) 943
K3=6.62

C14H12N2O4 HL (221)
N-4-Tolyl-3-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH

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

Pr+++ EMF diox/w 35°C 50% U K1=9.16 B2=16.81 1977AKa (87291) 944
K3=6.62

C14H12O2 HL Diphenylacetic CAS 117-34-0 (1952)
Diphenylethanoic acid; (C6H5)2CH.COOH

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

Pr+++ ix NaClO4 20°C 0.20M U K1=2.15 B2=<4.0 1968WZa (87334) 945
B3 < 5.3

C14H13NO2 HL DPAHA CAS 4463-22-3 (880)
2,2'-Diphenylacetohydroxamic acid; (C6H5)2.CH.CO.NH.OH

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

Pr+++ gl alc/w 30°C 50% U T H K1=6.80 1981RSb (87407) 946
Medium: 50% v/v EtOH, 0.1 M KNO3. K1=7.91(I=0), 7.19(I=0.05)

C14H13NO2 HL CAS 1503-92-0 (1817)
N-(4-Tolyl)benzohydroxamic acid; C6H5.CO.N(C6H4.CH3).OH

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

Pr+++ gl diox/w 25°C 50% U T H K1=9.95 B2=18.41 1983AGb (87451) 947
K3=7.45
35 C: K1=9.40, K2=8.46, K3=7.45

C14H13NO2 HL CAS 889-29-2 (6259)
N-Salicylidene-3-methoxyaniline; HO.C6H4.CH:N.C6H4.OCH3

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

Pr+++ gl alc/w 25°C 50% U K1=4.80 B2=8.80 1977DWa (87531) 948

C14H13NO4S 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

Pr+++ gl NaClO4 25°C 0.10M U T H K1=4.90 B2= 9.03 1978GKb (87579) 949
Data for 25-35 C and I=0.01-0.10 M. At I=0.0 M, DH(K1)=21.1 kJ mol⁻¹,
DS(K1)=240 J K⁻¹ mol⁻¹.

C14H14N2O2 HL (6168)
N-(2-Hydroxy-3-methoxybenzylidene)phenylhydrazine; C6H5.NH.N:CH.C6H3(OH)OCH3

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

Pr+++ gl diox/w 30°C 75% U K1=8.83 1988MKd (87658) 950

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

Pr+++ gl mixed 30°C 0.10M U T H K1=11.27 B2=20.61 1988TRb (87724) 951
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water

C14H16N2O2S HL CAS 189231-67-2 (8475)
2-Thiophenylhydrazodimedone;

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

Pr+++ gl diox/w 25°C 75% C T H K1=12.21 B2=23.81 1997EIa (87873) 952
Medium: 75% v/v dioxane/H2O, 0.10 M KNO3. Data for 10-40 C. DH(K1)=-6.61
kJ mol⁻¹, DS(K1)=-7.87 J K⁻¹ mol⁻¹; DH(K2)=-6.14, DS(K2)=-8.09.

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

Pr+++ gl mixed 30°C 0.10M U T H K1=11.81 B2=21.89 1988TRb (87891) 953
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

Pr+++ gl NaClO4 25°C 1.00M C H K1=12.26 1992YNa (87966) 954
By calorimetry: DH(K1)=13.5 kJ mol⁻¹, DS=280 J K⁻¹ mol⁻¹

C14H16O5 L CAS 2880-96-8 (6798)
2,3-Anhydro-4,6-O-benzylidene-alpha-D-mannopyranoside;

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

Pr+++ nmr non-aq ? 100% U M 1991HKf (88029) 955
K(PrA3+L)=0.69

Medium: CDCl3. A=6,6,7,7,8,8,8-heptafluoro-2,2-dimethyloctane-3,5-dione

C14H18N2O5 HL Aspartame CAS 22839-47-0 (417)
Aspartyl-phenylalanine methyl ester; H2NCH(CH2COOH)CONHCH(CH2Ph)COOCH3

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

Pr+++ gl KCl 25°C 0.5M U TIH K1=0.85 1985AAb (88076) 956
B(PrHL)=2.40

DH(K1)=-8.79 kJ mol⁻¹, DS(K1)=-13.2; DH(PrHL)=-14.1, DS(PrHL)=-1.2.
By 1H nmr, K1=0.78. At 35 C, K1=0.80, B(PrHL)=2.32.

C14H19NO7 HL (6775)
16-Nitro-3,6,9,12-tetraoxabicyclo[12.3.1]octadeca-1(18),14,16-trien-18-ol;

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

Pr+++ gl R4N.X 25°C 0.10M C K1=3.00 1990CBe (88152) 957

C14H20O5 L Benzo15-crown-5 CAS 14098-44-3 (608)
2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;

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

Pr+++ dis non-aq 25°C 100% U B2=8.02 1990NIa (88357) 958
B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate

Pr+++ ISE R4N.X 25°C 0.10M C K1=2.18 1986XJa (88358) 959

C14H20O8S HL CAS 127461-53-4 (7818)
2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene-4'-sulfonic acid;

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

Pr+++ dis R4N.X 25°C 0.12M C K1=1.91 1998SUa (88396) 960
Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

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

Pr+++ gl KCl 25°C 1.0M U K1=6.78 1987CMe (88447) 961
K(PrHL+H)=5.76
K(PrL+H)=8.29

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

Pr+++ gl KCl 25°C 1.0M U K1=7.47 1987CMe (88461) 962
K(PrHL+H)=6.07
K(PrL+H)=7.30

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

Pr+++ gl KCl 25°C 1.0M U K1=17.30 1987CMe (88754) 963
K(PrL+H)=2.18

Pr+++ gl KCl 25°C 1.00M U K1=17.30 1984MFa (88755) 964

Pr+++ gl KNO3 27°C 0.10M U M 1981KSe (88756) 965
K(Pr+L+HA)=12.86
K(PrL+HA)=5.87

H2A=Citraconic acid

Pr+++ gl KNO3 27°C 0.10M U M 1981KSe (88757) 966
K(Pr+L+HA)=12.78
K(PrL+HA)=5.96

H2A=Maleic acid

Pr+++ gl NaClO4 25°C 0.50M U K1=16.53 1977GGb (88758) 967

Pr+++ sp none 25°C 0.0 C K1=15.15 1977HAa (88759) 968
Medium not reported.

Pr+++ gl KNO3 30°C 0.10M M T HM 1977RTa (88760) 969
K(PrL+A)=3.14
K(PrL+D)=3.35
K(PrL+C)=3.53

A=glycolate, C=malate, D=lactate. Also at 35 C

Pr+++ gl KNO3 30°C 0.10M U M 1975RTb (88761) 970
K(PrL+salicylate)=5.46
K(PrL+sulfosalicylate)=3.95
K(PrL+8-quinolinolate)=3.45

Pr+++ EMF KNO3 25°C 0.10M U T H K1=17.23 1962MHa (88762) 971
DH(K1)=20.9 kJ mol⁻¹, DS=402 J K⁻¹ mol⁻¹. At 20 C: K(PrL+H)=2.35

Pr+++ vlt KCl 20°C 0.10M U K1=17.31 1954SGa (88763) 972

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

Pr+++ gl KCl 25°C 1.0M U K1=7.48 1987CMe (88840) 973
K(PrHL+H)=5.34
K(PrL+H)=7.76

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

Pr+++ gl KCl 25°C 1.0M U K1=7.76 1987CMe (88865) 974
K(PrHL+H)=5.89
K(PrL+H)=7.18

Pr+++ gl KCl 25°C 1.00M U K1=7.76 1984MFb (88866) 975

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

Pr+++ gl R4N.X 25°C 0.10M C K1=7.74 1988CCb (88885) 976

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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Pr+++	cal	KNO3	25°C	0.10M	C	T			1988MIa (89358)	977
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DH(K1)=-27.6 kJ mol⁻¹, DS=301.5 J mol⁻¹ K⁻¹. Also data for 283 and 313 K

Pr+++	cal	NaClO4	25°C	0.10M	C	H			1987YJa (89359)	978
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DH(K1)=-20.3 kJ mol⁻¹, DS(K1)=335 J K⁻¹ mol⁻¹.

Pr+++	sp	KCl	*	0.1M	U			K1=21.13 K(Pr+HL)=12.97	1980KKf (89360)	979
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room temperature

Pr+++	cal	NaClO4	25°C	0.50M	U	H			1977CGc (89361)	980
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DH(K1)=-35.5 kJ mol⁻¹

Pr+++	gl	NaClO4	25°C	0.50M	U			K1=19.62	1977GGb (89362)	981
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Pr+++	sp	oth/un	20°C	0.50M	U			K1=20.14	1971PRa (89363)	982
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By potentiometry : K1=20.22

Pr+++	sp	oth/un	18°C	.003M	U			K1=21.79 B(Pr2L)=27.92	1970KAf (89364)	983
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Pr+++	cal	KNO3	27°C	0.10M	U	H			1968CLd (89365)	984
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DH(K1)=-27.2 kJ mol⁻¹, DS=313 J K⁻¹ mol⁻¹

Pr+++	EMF	KNO3	25°C	0.10M	U	H		K1=21.07	1962MTc (89366)	985
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DH(K1)=-29.7 kJ mol⁻¹, DS=301 J K⁻¹ mol⁻¹

Pr+++	gl	oth/un	25°C	0.10M	U			K1=21.85	1959HCa (89367)	986
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 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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Pr+++	vlt	KNO3	20°C	0.10M	U			K1=15.09	1969NDc (89517)	987
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 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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Pr+++	vlt	KNO3	20°C	0.10M	U			K1=17.36	1974NLa (89537)	988
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 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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Pr+++ gl KCl 25°C 1.00M U M 1976BKa (89598) 989
K(PrEDTA+L)=3.5
K(PrEDTA+HL)=3.5
K(2PrEDTA+L)=7.2

Pr+++ gl KCl 25°C 0.10M U 1974Kpd (89599) 990
K(Pr+HL)=6.40

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

Pr+++ vlt KNO3 20°C 0.10M U K1=17.32 1968NLb (89640) 991

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

Pr+++ gl R4N.X 25°C 0.10M C K1=10.14 1988CCb (89656) 992

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

Pr+++ gl NaClO4 25°C 0.10M U 1995HAa (89689) 993

K(Pr+HL)=4.78
K(Pr+H2L)=4.14
K(Pr+H3L)=3.02
B(PrHL)=14.2

B(PrH2L)=19.69, B(PrH3L)=22.74

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

Pr+++ gl KNO3 25°C 0.10M U K1=11.54 1984TPa (89735) 994
K(Pr+HL)=6.99

C14H24N2O10 EGTA CAS 67-42-5 (349)
Ethyleneglycol-0,0'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L

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

Pr+++ gl NaNO3 25°C 0.0 U K1=16.02 1996KDb (89917) 995

Extrapolated from data for I=0.05-0.15 M NaNO3.

Pr+++ gl NaNO3 25°C 0.10M U I K1=15.85 1996KDc (89918) 996
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=16.02.

Pr+++ gl NaNO3 25°C 0.10M M K1=15.85 1996KDd (89919) 997
Data for 0.05-0.15 M NaNO3. At I=0, K1=16.02.

Pr+++ gl NaNO3 25°C 0.10M M I K1=15.85 1995KDb (89920) 998
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=16.02.

Pr+++ gl NaNO3 25°C 0.10M M I K1=15.85 1995KDc (89921) 999
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=16.02.

Pr+++ gl NaNO3 25°C 0.10M M I K1=15.851 1995KDd (89922)1000
Data for 0.15 and 0.05 M NaNO3. At I=0, K1=16.027.

Pr+++ gl NaNO3 25°C 0.0 U HM K1=15.86 1991ADb (89923)1001
K(PrL+ala)=3.19
K(PrL+phe)=2.85
Extrapolated from data for 0.01-0.1 M NaNO3. Data for 35 and 45 C. At 35 C
DH(PrL+ala)=-31.5 kJ mol⁻¹, DS=-44.9; DH(PrL+phe)=-26.2, DS=-33.7.

Pr+++ gl KCl 25°C 1.0M U M K2=1.50 1985KBb (89924)1002
K(PrL+ida)=1.4

Pr+++ EMF KNO3 20°C 0.10M U K1=16.05 1962MMc (89925)1003

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

Pr+++ gl KNO3 25°C 0.10M C K1=17.20 1985TPa (90105)1004

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

Pr+++ gl R4N.X 25°C 0.10M M K1=11.31 1986COB (90203)1005

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

Pr+++ ISE non-aq 30°C 100% C T H K1=15.4 1986ALa (90429)1006
Medium: propylene carbonate, 0.1 M Et4NClO4. DH and DS given

Pr+++ sp non-aq 25°C 100% U K1=3.86 1983PSc (90430)1007
Medium: DMSO

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

Pr+++ gl R4N.X 25°C 0.10M C K1=7.04 1988CCc (90486)1008

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

Pr+++ gl non-aq 25°C 100% C K1=7.30 1989BPa (90535)1009

Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

C14H30O7 L CAS 1072-40-8 (2499)

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

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

Pr+++ gl non-aq 25°C 100% C K1=6.27 1989BPa (90707)1010

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

Pr+++ gl R4N.X 25°C 0.10M U K1=13.39 1996BJa (90771)1011

K(Pr+HL)=10.16

K(Pr+H2L)=5.37

Medium: 0.1 M Me4NCl

C15H11N04 HL CAS 1776-18-7 (955)

3-Phenyl-1-(2'-hydroxy-5'-nitrophenyl)-2-propen-1-one;

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

Pr+++ gl alc/w 35°C 70% U K1=6.14 B2=12.20 1982SLb (91081)1012

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

Pr+++ sp alc/w 21°C 50% U I K1=9.48 1981MCb (91237)1013

Medium: 50% MeOH, 0.1 M NaClO4. In 75% MeOH K1=11.00

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

Pr+++ gl diox/w 25°C 75% C TIH K1=6.73 B2=12.52 1989SVa (91309)1014
DH(K1)=-41.73 kJ mol⁻¹

C15H11O2Br HL CAS 1218-20-0 (954)
3-Phenyl-1-(2'-hydroxy-5'-bromophenyl)-2-propen-1-one;

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

Pr+++ gl alc/w 35°C 70% U K1=6.94 1982SLb (91373)1015

C15H11O2Cl HL CAS 1218-24-2 (953)
3-Phenyl-1-(2'-hydroxy-5'-chlorophenyl)-2-propen-1-one;

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

Pr+++ gl alc/w 35°C 70% U K1=6.80 B2=13.29 1982SLb (91396)1016

Pr+++ gl alc/w 35°C 70% U K1=6.80 B2=13.29 1980SLb (91397)1017

C15H12O5 HL (1261)
mono-Thiodibenzoylmethane; C6H5.CO.CH2.CS.C6H5

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

Pr+++ gl NaClO4 30°C 0.05M U K1=7.00 B2=13.54 1979VMa (91501)1018
K3=5.92

C15H12O2 HL CAS 1214-47-7 (951)
3-Phenyl-1-(2'-hydroxyphenyl)-2-propen-1-one, 2'-hydroxychalkone;
C6H5.CH:CH.CO.C6H4.OH

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

Pr+++ gl alc/w 35°C 70% U K1=7.52 B2=14.87 1982SLb (91589)1019
Medium: 70% EtOH, 0.1 M KNO3

Pr+++ gl alc/w 35°C 70% U K1=7.52 B2=14.87 1980SLb (91590)1020

C15H12O3 H2L CAS 1469-94-9 (3445)
2-Hydroxydibenzoylmethane; HO.C6H4.CO.CH2.CO.C6H5

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

Pr+++ gl diox/w 30°C 70% U 1996SNa (91608)1021

K(Pr+HL)=10.80
K(PrHL+HL)=8.50

Medium: 70% v/v dioxane/H₂O, 1.0 M NaClO₄.

C15H13NO2 HL CAS 959-66-0 (245)
Benzoyl-acetanilide; C₆H₅.CO.CH₂.CO.NH.C₆H₅

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

Pr+++ gl alc/w 30°C 70% M K1=5.09 1978SAb (91634)1022

C15H13NO2 HL CAS 7369-44-0 (4066)
N-3-Diphenylpropenohydroxamic acid;

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

Pr+++ dis oth/un RT 0.05M C 1993ATa (91641)1023

Method: extraction from 0.05 M triethanolamine buffer into chloroform.

Analysis by spectrophotometry. K(Pr+3HL(org)=PrL3(org)+3H)=-18.10

C15H13N3O HL CAS 104992-04-3 (6852)
2-((1H-Benzimidazo-2-yl-methyl)-iminomethyl)phenol;

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

Pr+++ gl alc/w 30°C 60% U M K1=5.24 B2=10.25 1990DOb (91666)1024

K(PrA+L)=4.22

K(PrB+L)=3.94

K(PrC+L)=3.74

H2A=iminodiethanoic acid, H3B=hydroxyethyliminodiethanoic acid, H3C=NTA.

Data also for 3-chloro and 3-methoxysalicylidene analogues

C15H14NOCl HL CAS 268214-29-5 (8398)
4-Chloro-3,5-dimethyl-2-[(phenylimino)methyl]phenol;

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

Pr+++ gl diox/w 30°C 75% M K1=7.12 2000ANa (91694)1025

Medium: 75% v/v dioxan/H₂O, 0.10 M NaClO₄. Data for an extensive series of 4'-substituted phenylimino derivatives.

C15H14O3S H2L (6191)
1-(2-Hydroxy-3,5-dimethylphenyl)-3-(2-thiophene)-propan-1,3-dione;
C₄H₃S.CO.CH₂.CO.C₆H₂(OH)(CH₃)₂

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

Pr+++ gl diox/w 30°C 50% U 1987DDc (91786)1026

K(Pr+HL)=6.36

K(PrHL+HL)=5.72

C15H1403S H2L CAS 57051-65-7 (6190)
1-(2-Hydroxy-4,5-dimethylphenyl)-3-(2-thiophene)-propan-1,3-dione;
C4H3S.CO.CH2.CO.C6H2(OH)(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	diox/w	30°C	50%	U				1987DDc	(91792)1027
								K(Pr+HL)=7.23 K(PrHL+HL)=6.30		

C15H1404 H2L CAS 60403-51-2 (2361)
1-(2-Furyl)-3-(2-hydroxy-3,4-dimethylphenyl)-propan-1,3-dione;
C4H3O.CO.CH2.CO.C6H2(OH)(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	diox/w	30°C	50%	U				1987DDc	(91798)1028
								K(Pr+HL)=7.04 K(PrHL+HL)=6.51		

C15H1404 H2L CAS 60403-52-3 (6186)
1-(2-Furyl)-3-(2-hydroxy-3,5-dimethylphenyl)-propan-1,3-dione;
C4H3O.CO.CH2.CH2.C6H2(OH)(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	diox/w	30°C	50%	U				1987DDc	(91804)1029
								K(Pr+HL)=6.71		

C15H1404 H2L CAS 60403-54-5 (6187)
1-(2-Furyl)-3-(2-hydroxy-3,6-dimethylphenyl)-propan-1,3-dione;
C4H3O.CO.CH2.CH2.C6H2(OH)(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	diox/w	30°C	50%	U				1987DDc	(91810)1030
								K(Pr+HL)=6.90 K(PrHL+HL)=6.65		

C15H15N02 HL (1167)
N-(4-Tolyl)-4'-tolylhydroxamic acid; CH3.C6H4.CO.N(C6H4.CH3)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	diox/w	25°C	50%	U	T H		K1=10.25 B2=19.01 K3=7.75	1983AGb	(91846)1031

35 C: K1=9.25, K2=8.25, K3=7.25

C15H15N03 HL (6240)

N-4-Tolyl-4'-methoxybenzohydroxamic acid; CH3O.C6H4.CO.N(C6H4.CH3).OH

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

Pr+++ gl diox/w 25°C 50% U T H K1=10.40 B2=19.30 1983AGb (91868)1032
K3=7.91

35 C: K1=9.93, K2=8.42, K3=7.43

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

Pr+++ gl alc/w 20°C 75% U T H K1=10.01 B2=16.94 1993RAa (92034)1033
Medium: 75% v/v MeOH/H2O; 0.10 M KNO3

Pr+++ gl mixed 30°C 0.10M U T H K1=12.01 B2=22.44 1988TRb (92035)1034
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

Pr+++ gl KNO3 25°C 0.10M C K1=11.69 1978MPb (92156)1035

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

Pr+++ sp non-aq 25°C 100% M K1=7.6 B2=14.60 1997RPb (92288)1036
B3=22.2

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

Pr+++ EMF KCl ? 0.10M U K1=15.70 1966VLa (92381)1037

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

Pr+++ gl KNO3 25°C 0.10M C K1=18.64 1989SPa (92398)1038
K(Pr+HL)=12.78

C15H26N4O9 H4L (7685)
Diethylenetriamine-N,N,N',N'',N''-pentaethanoic acid N'-methyleamide;

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

Pr+++ gl KCl 25°C 0.10M C K1=18.77 2000SBb (92436)1039

C15H26N4O9 H4L CAS 137076-43-8 (5085)
Diethylenetriamine-N,N,N',N'',N''-pentaethanoic acid N-methyleamide;

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

Pr+++ gl KCl 25°C 0.10M C K1=17.60 2000SBb (92451)1040

C15H33NO6 L CAS 70384-51-9 (838)
Tris(3,6-dioxahexyl)amine; (CH3.CH2.O.CH2.CH2.O.CH2.)3N

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

Pr+++ ISE non-aq 25°C 100% C T H K1=8.8 B2=16.3 1986ALa (92568)1041
Medium: propylene carbonate, 0.1 M Et4NClO4. DH, DS given

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

Pr+++ kin oth/un 25°C 0.02M U K1=4.60 1972GSe (92662)1042

C16H11N5O4 H2L (5153)
1,5-Bis(2-carboxyphenyl)-3-cyanoformazan;

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

Pr+++ gl diox/w 25°C 70% U I K1=9.06 B2=17.68 1996DAb (92898)1043
Medium: 70% dioxane/H2O, 0.10 M NaClO4. In 50% EtOH/H2O, 0.10 M NaClO4,
K1=10.08, K2=9.07.

C16H12N2O HL CAS 5603-14-5 (9083)
2-[(Quinolylmethylene)amino]phenol;

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

Pr+++ gl alc/w 25°C 50% C K1=6.21 B2=11.22 1997GSa (92929)1044
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.

C16H12N2S L CAS 31230-95-2 (9085)
2(2-Benzothiazoliny)quinoline;

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

Pr+++ gl alc/w 25°C 50% C K1=5.97 B2=10.81 1997GSa (93108)1045
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

Pr+++ gl NaCl 25°C 0.10M U K1=10.18 B2=17.84 1997IHa (93117)1046
B3=24.30

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;

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

Pr+++ gl diox/w 30°C 75% M K1=6.54 1987ESa (93134)1047

C16H13N2O10AsS2 H5L Thorin I CAS 3688-92-4 (2609)
1-((2-Arsonophenyl)azo)-2-hydroxy-3,6-naphthalylldisulfonic acid;

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

Pr+++ gl NaClO4 30°C 0.10M U 1976NDa (93206)1048
K(Pr+H2L=PrH2L)=5.38
K(PrHL+H)=7.71
K(PrL+H)=10.55

C16H13N2O11AsS2 H6L Arsenazo I CAS 520-10-5 (277)
2-(2'-Arsonophenylazo)chromotropic acid;

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

Pr+++ sp oth/un 20°C 0.10M U 1971SSd (93263)1049
K(Pr+H2L)=8.50

C16H14N2O5 H2L (7017)
4-Hydroxy-1-carboxy-7-dimethylaminophenoxaz-3-one methyl ester;

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

Pr+++ sp alc/w 25°C 10% U I 1979KRb (93443)1050
B3=19.34

Medium: w/w 10% EtOH/H2O, 0.1 M NaClO4. In 30%: B3=19.85

C16H14O2 HL CAS 1775-98-0 (952)
3-Phenyl-1-(2'-hydroxy-5'-methylphenyl)-2-propen-1-one;

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

Pr+++ gl alc/w 35°C 70% U K1=7.79 B2=15.06 1982SLb (93533)1051
Medium: 70% EtOH, 0.1 M KNO3

C16H1403 H2L CAS 29976-82-7 (8522)
1-(2-Hydroxy-5-methylphenyl)-3-phenyl-1,3-propanedione;

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

Pr+++ gl diox/w 30°C 70% U 1996SNa (93540)1052

K(Pr+HL)=9.80
K(PrHL+HL)=7.95

Medium: 70% v/v dioxane/H2O, 1.0 M NaClO4.

C16H1403 HL CAS 3327-24-0 (956)
3-(4''-Methoxyphenyl)-1-(2'-hydroxyphenyl)-2-propen-1-one;

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

Pr+++ gl alc/w 35°C 70% U K1=7.41 B2=14.34 1982SLb (93574)1053

Pr+++ gl alc/w 35°C 70% U K1=7.41 B2=14.34 1980SLb (93575)1054

C16H1404 HL BHMA (5929)
omega-Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;

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

Pr+++ gl alc/w 30°C 25% M K1=6.29 B2=11.41 1987DGb (93584)1055

Medium: 25% v/v EtOH/H2O

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

Pr+++ gl diox/w 25°C 70% U K1=7.45 B2=14.67 1996DAb (93642)1056

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

Pr+++ gl diox/w 30°C 75% U K1=9.35 B2=17.15 1988ESb (93785)1057

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

Pr+++ gl NaClO4 25°C 0.10M U K1=7.05 2001WZa (93846)1058
B(PrHL)=14.33

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

Pr+++ vlt KNO3 20°C 0.10M U K1=16.29 1969NDb (94048)1059

C16H22O6 L (6733)
4'-Acetyl-2,3-benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;

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

Pr+++ dis non-aq 25°C 100% U 1993INa (94252)1060
B(Pr+3P+2L)=7.65

By solvent extraction into dichloromethane. B is the extraction constant
Pr(aq)+picrate(aq)+L(org)=PrL2P3(org).

C16H23NO8 L CAS 53408-96-1 (1765)
2,3-(4'-Nitrobenzo)-1,4,7,10,13,16-hexaoxacyclooctadeca-2-ene;
4'-Nitrobenzo-18-crown-6

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

Pr+++ ISE R4N.X 25°C 0.10M C K1=2.45 1986XJa (94273)1061

C16H23N5O4 L (6969)
12-(4-Nitrobenzyl)-1,4,7,10-tetraazacyclotridecane-11,13-dione;

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

Pr+++ gl NaClO4 30°C 0.10M M 1994LZa (94300)1062
B(PrH-2L)=-12.5

C16H24O9S HL SB18C6 CAS 185099-14-3 (7819)
2,3-Benzo-1,4,10,13,16-hexaoxacyclooctadeca-2-ene-4'-sulfonic acid;

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

Pr+++ dis R4N.X 25°C 0.12M C K1=1.81 1998SUa (94481)1063
Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

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

Pr+++ gl R4N.X 25°C 0.10M C K1=8.67 1988CCb (94575)1064

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

Pr+++ sp KCl 25°C 0.08M U K1=11.0 1994FCa (94675)1065

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

Pr+++ sp KCl 25°C 0.08M U K1=14.6 1994FCa (94689)1066

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

Pr+++ gl KNO3 20°C 0.10M U K1=11.93 1969NDc (94719)1067

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

Pr+++ vlt KNO3 20°C 0.10M U K1=15.11 1969NDc (94745)1068

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

Pr+++ vlt KNO3 20°C 0.10M U K1=17.28 1979MBd (94771)1069

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

Pr+++ gl NaCl 37°C 1.0M C K1=22.4 1994TBb (94925)1070
Method: Competitive reaction with Ce3+ 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

Pr+++ gl R4N.X 25°C 0.10M U K1=12.22 1983CRb (95052)1071

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

Pr+++ cal non-aq 25°C 100% C H K1=11.52 1990NRa (95270)1072
Medium: MeCN. DH(K1)=-22.3 kJ mol⁻¹, DS=-22.1 J K⁻¹ mol⁻¹. In PC: K1=18.70,
DH(K1)=-21.8, DS=12.4

Pr+++ ISE non-aq 30°C 100% C T H K1=18.6 1986ALa (95271)1073
Medium: propylene carbonate, 0.1 M Et4NClO4. DH and DS given

Pr+++ sp non-aq 25°C 100% U K1=3.47 1983PSc (95272)1074
Medium: DMSO

Pr+++ gl R4N.X 25°C 0.25M C K1=6.58 1981BBe (95273)1075
Medium: Me4NCl

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

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

Pr+++ cal non-aq 25°C 100% U H K1=3.07 1993LLa (95391)1076
Medium: MeCN. DH(K1)=-23.3 kJ mol⁻¹.

C17H12N2O3Cl HL (6197)
8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one-4-chloroanil;
Cl.C6H4.N:CH.C9H3O(OH)(CH3)(:O)

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

Pr+++ gl diox/w 30°C 70% U K1=4.84 B2=8.49 1987ECa (95693)1077
B3=11.01

C17H12N2O5 HL (6198)
8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one-4-nitroanil;
NO2.C6H4.N:CH.C9H3O(OH)(CH3)(:O)

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

Pr+++ gl diox/w 30°C 70% U K1=4.67 B2=8.15 1987ECa (95710)1078
10.60

C17H1204 H2L CAS 60430-57-8 (6189)
1-(2-Furyl)-3-(2-naphthol)-propan-1,3-dione; C4H3O.CO.CH2.CO.C10H6.OH

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

Pr+++ gl diox/w 30°C 50% U 1987DDc (95734)1079
K(Pr+HL)=6.57
K(PrHL+HL)=5.98

C17H13N4O3 HL (5927)
1-Phenyl-3-methyl-4-(2'-carboxyphenylhydrazo)-5-pyrazolone;

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

Pr+++ gl diox/w 30°C 75% M K1=15.74 B2=29.15 1987ESa (95771)1080

C17H14N2O2 L CAS 4551-69-3 (698)
4-Benzoyl-3-methyl-1-phenyl-2-pyrazolin-5-one;

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

Pr+++ gl NaNO3 20°C 0.10M U M 1981GCa (95896)1081
B(Pr+3L+3TBP)=24.87
B(Pr+3L+2TBPoxide)=25.6
B(Pr+3L+5TBPoxide)=35.5

C17H15N4O2 L CAS 97671-53-9 (5926)
1-Phenyl-3-methyl-4-(2'-methoxyphenylhydrazo)-5-pyrazolone;

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

Pr+++ gl diox/w 30°C 75% M K1=8.14 B2=15.37 1987ESa (96012)1082

C17H16N2O3S2 L CAS 127335-83-5 (6849)
Sulfafurazole thiophene-2-aldehyde Schiff base; C4H3S.CH:N.C6H4.SO2.NH.C4HO(CH3)2

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

Pr+++ gl oth/un 25°C 0.10M U T K1=5.05 1990TSa (96042)1083
30 C: K=4.90, 35 C: K=4.78

C17H16O4 H2L CAS 29976-84-9 (8523)
1-(2-Hydroxy-5-methylphenyl)-3-(4-methoxyphenyl)-1,3-propanedione;

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

Pr+++ gl diox/w 30°C 70% U 1996SNa (96127)1084
K(Pr+HL)=8.20
K(PrHL+HL)=6.10

Medium: 70% v/v dioxane/H2O, 1.0 M NaClO4.

C17H16O4 H2L CAS 58134-82-0 (6193)

Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;

C6H5.CO.CH2.CO.C6H2(OH)(OCH3)(CH3)

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

Pr+++ gl alc/w 30°C 75% U T H K1=7.02 B2=13.24 1987DGd (96161)1085
20 C:K1=6.86, K2=6.66; 40 C:K1=7.36, K2=6.52; 50 C:K1=7.46, K2=6.59
DH(K1)=-38 kJ mol⁻¹, DS=4 J K⁻¹ mol⁻¹

C17H18O4 H2L (6188)

1-(2-Furyl)-3-(2-hydroxy-3,4-diethylphenyl)-propan-1,3-dione;

C4H3O.CO.CH2.CO.C6H2(OH)(C2H5)2

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

Pr+++ gl diox/w 30°C 50% U K(Pr+HL)=6.92 1987DDc (96245)1086

C17H20N3O3F HL (7845)

1-Ethyl-6-fluoro-7-(4-methylpyperazine-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid;

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

Pr+++ gl alc/w 22°C 0.1M U K1=5.94 B2=11.22 2000TBb (96289)1087
K3=4.00

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

Pr+++ sp NaNO3 25°C 0.10M C K1=8.16 19880Ha (96424)1088
K(Pr+HL)=2.77

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

Pr+++ cal non-aq 25°C 100% C H K(PrNO3+L)=4.22 1993LLb (96537)1089

Medium: acetonitrile. DH(PrNO3+L)=-46.40 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

Pr+++ gl KNO3 25°C 0.10M U K1=8.37 1984TPa (96576)1090
K(Pr+HL)=5.44

C18H15NO3 HL (6196)
8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one 4-methylanil;
CH3.C6H4.N:CH.C9H3O(OH)(CH3)(O)

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

Pr+++ gl diox/w 30°C 70% U K1=6.17 B2=11.39 1987ECa (96997)1091
B3=15.01

C18H16N2O3 HL (5560)
2-(2-Acetylphenylhydrazono)-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

Pr+++ gl diox/w 30°C 75% U K1=10.07 B2=18.72 1988ESb (97178)1092

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

Pr+++ nmr KCl 25°C 1.0M C H K1=2.25 2004BRa (97271)1093
Method: 1H nmr measurements in D2O. DH(K1)=-13 kJ mol⁻¹,
DS(K1)=-2 J mol⁻¹K⁻¹

C18H20N2O6 H4L CAS 10328-28-6 (3501)
Ethylenedinitrilo-N,N'-bis(2'-hydroxyphenyl)-N,N'-diethanoic acid;

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

Pr+++ EMF oth/un ? ? U 1968TRc (97409)1094
K(Pr+HL)=8.97

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

Pr+++ EMF KNO3 25°C 0.10M C T H K1=17.55 1985HWb (97439)1095
K(PrL+H)=7.47

Method: Hg (and glass) electrode, using Hg(II) as competitive indicator
ion. Data for 10-35 C. DH(K1)=-54.7 kJ mol⁻¹, DS(K1)=152 J K⁻¹ mol⁻¹.

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

Pr+++ gl KNO3 25°C 0.10M C K1=14.82 1985TPa (97658)1096

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

Pr+++ gl non-aq 25°C 100% U K1=3.60 1982MDa (97811)1097
Medium: propylene carbonate

C18H29N04 L CAS 207603-17-6 (9000)
7-(Phenylmethyl)-1,4,10,13-tetraoxa-7-azacyclohexadecane;

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

Pr+++ cal non-aq 25°C 100% C H K1=3.27 1998LBc (97880)1098
Medium: acetonitrile. DH(K1)=-19.67 kJ mol⁻¹, DS(K1)=-3.4 J K⁻¹ mol⁻¹.

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

Pr+++ gl R4N.X 25°C 0.10M C K1=8.85 1988CCb (97915)1099

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

Pr+++ EMF KNO3 25°C 0.10M C T H K1=22.77 1987HCa (98083)1100
K(PrL+H)=3.65
K(PrHL+H)=2.27

Method: Hg electrode; competitive reaction with Hg(II).
Data for 15-35 C. At 25 C, DH(K1)=-125 kJ mol⁻¹, DS(K1)=15.7 J K⁻¹ mol⁻¹.

Pr+++ vlt NaClO4 25°C 0.40M C K1=23.45 1978MNB (98084)1101
Medium: 0.40 M NaClO4, pH 4.80. Method: polarography, using Cd as
indicator ion.

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

Pr+++ gl R4N.X 25°C 0.10M C K1=7.16 1988CCc (98343)1102

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

Pr+++ cal non-aq 25°C 100% C H K1=15.35 2003DCa (98698)1103
Method: competitive titration calorimetry of AgL+. Medium: acetonitrile.
DH(K1)=-119.5 kJ mol⁻¹, DS(K1)=-107 J K⁻¹ mol⁻¹.

Pr+++ oth non-aq 25°C 100% C H K1=11.01 1990NRa (98699)1104
Medium: MeCN. DH(K1)=-22.2 kJ mol⁻¹, DS=-22.1 J K⁻¹ mol⁻¹.
In PC: DH(K1)=-22.7, DS=-3.2

Pr+++ ISE non-aq 30°C 100% C T H K1=15.6 1986ALa (98700)1105
Medium: propylene carbonate, 0.1 M Et4NClO4. DH and DS given

Pr+++ ISE non-aq 25°C 100% U H K1=15.88 1984GBa (98701)1106
0.1 M (ET)4NH4ClO4. DH=-94.5 kJ mol⁻¹; DS=-28 J K⁻¹ mol⁻¹.
In propylene carbonate.

Pr+++ gl alc/w 25°C 100% C I K1=9.31 1983ANb (98702)1107
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4
In propylene carbonate, 0.1 M Et4NClO4, K1=18.7

Pr+++ sp non-aq 25°C 100% U K1=3.22 1983PSc (98703)1108
Medium: DMSO

Pr+++ gl R4N.X 25°C 0.25M C K1=6.37 1981BBc (98704)1109
Medium: Me4NCl

C18H40N2O10P2 H2L (7241)
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diylldimethylenediphosphonic acid
bis(Et-ester);

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

Pr+++ gl R4N.X 25°C 0.10M U K1=7.80 1996BJa (98897)1110
Medium: 0.1 M Me4NCl

C19H14O7S H4L Pyrocatechol Vi CAS 369596-29-2 (709)
Pyrocatechol Violet,
3-[3,4-Dihydroxyphenyl-3-hydroxy-4-oxo-2,5-cyclohexadien-1-ylidenemethyl-b.;

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

Pr+++ gl NaClO4 30°C 0.20M U M K1=8.60 1978MSk (99113)1111
K(Pr(nta)+L)=6.33

C19H16N4O L LAMI (5930)
2-(2'-Lepidylazo)-N-methylisatin

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

Pr+++ gl diox/w 30°C 75% M I K1=9.63 B2=18.75 1987DGc (99167)1112
Medium: 75% v/v dioxan/H2O, 0.15 M NaClO4

C20H13N3O7S H3L Eriochrome Bl T CAS 1787-61-7 (997)
1-(1-Hydroxy-2-naphthylazo)-6-nitro-2-naphthol-4-sulfonic acid;

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

Pr+++ gl NaClO4 30°C 0.10M U M K1=10.63 B2=19.6 1987S0a (99574)1113
K(PrA+L)=9.12
K(PrB+L)=8.12

H2A=hydroxyethyliminodiethanoic acid, H3B=nitriлотriethanoic acid

C20H14N2O5S 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

Pr+++ gl alc/w 30°C 50% C M K1=10.87 B2=20.14 1994S0a (99661)1114
K(PrA+L)=9.32
K(Pr(nta)+L)=8.66

Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4.
H2A is hydroxyethyliminodiethanoic acid.

Pr+++ gl NaClO4 30°C 0.10M U T H K1=12.43 1991NNb (99662)1115
Also data for 40 and 50 C. DH and DS values.

C20H14N2O5S 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

Pr+++ gl diox/w 30°C 50% U K1=10.47 1976NNa (99698)1116

Pr+++ sp alc/w ? 98% U 1968RAa (99699)1117
K(?)=5.2

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

Pr+++ sp NaClO4 25°C 0.10M C K1=5.63 1979PLb (99714)1118

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

 Pr+++ sp none 25°C 0.0 U 1978BRb (99734)1119
 K1eff=4.03

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

 Pr+++ gl diox/w 30°C 75% U 1985RSb (99839)1120
 K(Pr+HL)=4.78
 K(Pr+2HL)=10.35

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

 Pr+++ gl KNO3 20°C 0.10M U K1=17.85 1985SNb (100014)1121
 K(PrL+H)=5.77
 K(PrHL+H)=5.30

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

 Pr+++ sp non-aq 25°C 100% C K1=1.72 2003ZRa (100212)1122
 Medium: DMSO. Method: competition with murexide.

Pr+++ cal non-aq 25°C 100% C H K1=2.54 1998LHa (100213)1123
 Medium: acetonitrile. DH(K1)=27.45 kJ mol⁻¹.

Pr+++ gl oth/un 25°C 0.0 U H K1=3.34 1991HJa (100214)1124

C20H24O12S2 H2L CAS 172985-47-6 (7820)
 2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene-4',4''-disulfonic
 acid;

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

 Pr+++ dis R4N.X 25°C 0.12M C K1=1.84 1998SUa (100284)1125
 Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

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

Pr+++ sp oth/un ? ? U K1=13.76 1971SSi (101550)1132

C22H17N4O14ClP2S2 H8L ClPhosphonazo 3 CAS 1914-99-4 (2577)
2,7-Bis((4-chloro-2-phosphophenyl)azo)chromotropic acid;

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

Pr+++ sp NaClO4 25°C 1.00M U K1=9.54 1977MNa (101581)1133

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

Pr+++ sp oth/un rt 0.10M C 2004LLa (101642)1134

K1eff=5.18
B2eff=9.70
B(2,2)eff=12.59

Method: spectral deconvolution. Medium: 0.1 M chloroacetate buffer, pH 3.5

Pr+++ sp oth/un 20°C ? U K(Pr+H4L)=15.38 1972SSi (101643)1135

C22H19N3O4S HL CAS 84819-63-6 (8347)
N-(3,4-DiMe-5-isoxazoly1)-4-[[2-hydroxy-1-naphthalenyl)methylene]amino]benzenesulfonamide;

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

Pr+++ gl NaClO4 25°C 0.10M U K1=7.4 1982MBa (101689)1136

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

Pr+++ EMF KNO3 25°C 0.10M C T H K1=10.86 1990HLA (101902)1137

K(PrL+H)=3.37

Method: Competitive reaction with Hg++, using Hg indicator electrode.
Data for 15-35 C. DH(K1)=-31.9 kJ mol⁻¹, DS(K1)=101 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

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  R4N.X  25°C 0.10M C          K1=11.23      1993YTa (101984)1138
*****
C22H28O13S2          H2L    DSDB21C7          CAS 204931-02-2 (7821)
2,3:11,12-Dibenzo-1,4,7,10,13,16,19-heptaoxacycloheneicosa-2,11-diene-4',4''-disulfo
nic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     dis R4N.X  25°C 0.12M C          K1=2.07      1998SUa (102080)1139
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
*****
C22H30N4          L          CAS 250790-21-7 (7943)
N,N'-Bis(1,1-dimethylethyl)-1,10-phenanthroline-2,9-dimethanamine;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  NaClO4 25°C 0.10M U          K1=7.90      2001WZa (102117)1140
          B(PrHL)=14.97
Also data for the N,N'-diethyl, isopropyl, butyl and isobutyl derivatives.
*****
C22H37N5O14          H7L          CAS 3234-59-1 (2425)
Tetraethylenepentamineheptaethanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  KNO3   25°C 0.10M U          K1=19.64      1968MIc (102340)1141
          K(Pr+HL)=13.46
          B(PrH-1L)=5.27
*****
C22H40N4O8          H4L          CAS 138763-18-5 (8607)
5,7,12,14-Tetramethyl-1,4,8,11-tetraazacyclotetradecane-N,N',N'',N'''-tetraethanoic
acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  KNO3   40°C 0.50M U T          K1=18.19      1995BIa (102359)1142
          K(PrL+H)=3.88
Also data for 80 C.
*****
C23H18N2O3          HL          (5561)
2-(2-Acetylphenylhydrazone)-1,3-diphenyl-prop-1,3-dione;
C6H5.CO.C(CO.C6H5):N.NH.C6H4.COCH3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++     gl  diox/w 30°C 75% U          K1=10.14 B2=17.97 1988ESb (102600)1143
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C23H18O9S H4L Eriochrome cyan CAS 3564-18-9 (433)
4'-Hydroxy-3,3'-dimethyl-2''-sulfofuchsone-5,5'-dicarboxylic acid;

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

Pr+++ sp oth/un 25°C ? U B2=10.6 1968MDc (102635)1144

C23H23NO5 L CAS 218619-58-0 (7808)
Dibenzo-pyridino-18-crown-6;

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

Pr+++ sp non-aq 25°C 100% C K1=1.68 2003ZRa (102665)1145
Medium: DMSO. Method: competition with murexide.

C23H24N4O2 L Trichachnine CAS 1251-85-0 (2606)
4,4'-Diantipyrylmethane,
4,4'-phenylmethylene-bis-(1,2-dihydro-1,5-dimethyl-2-phenylpyrazol-3-one

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

Pr+++ sp diox/w 25°C 100% U K1=4.66 1995KMa (102677)1146

C24H16O16S8 H8L CAS 237770-97-7 (8854)
25,26,27,28-Tetrahydroxy-2,8,14,20-tetrathiacalix[4]arene-5,11,17,23-tetrasulfonic
acid;

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

Pr+++ cal oth/un 25°C 0.01M C H K1=3.42 2004LWa (102870)1147
Medium: 0.01 M HCl. DH(K1)=6.9 kJ mol⁻¹, DS(K1)=88.9 J K⁻¹ mol⁻¹.

C24H32O14S2 H2L CAS 204931-03-3 (7822)
2,3:11,12-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracos-2,14-diene-4',4''-disul
fonic acid;

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

Pr+++ dis R4N.X 25°C 0.12M C K1=2.17 1998SUa (103196)1148
Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

C25H32N2O7 H2L (7374)
1,15-Diaza-3,4:12,13-dibenzo-5,8,11-trioxacycloctadecane-N,N'-diethanoic acid;

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

Pr+++ gl KNO3 25°C 0.5M C K1=4.91 1993YNa (103734)1149

C26H23N5O2 HL (5918)
Hippuric monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

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

Pr+++ gl diox/w 30°C 75% U K1=11.25 B2=21.72 1985RSb (103886)1150

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

Pr+++ gl R4N.X 25°C 0.10M C K1=12.53 1993YTa (103970)1151

C27H24N4O L BAHP (1023)
Benzoylacetone-monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

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

Pr+++ gl diox/w 30°C 75% U K1=7.68 1983RSa (104389)1152

C27H29NO11 L Adriamycin CAS 25316-40-9 (2407)
Doxorubicin;

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

Pr+++ sp oth/un 25°C 0.02M U T H K1=4.17 1985LSa (104462)1153
Medium: 0.02M pH 7.6 buffer

C27H38N6O12 H4L DGYVDA (6016)
Aspartyl-glycyl-tyrosyl-valyl-aspartyl-alanine;

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

Pr+++ nmr KCl 25°C 0.50M U 1987ZAa (104586)1154

K(Pr+HL)=3.13 ?
K(Pr+H2L)=2.47 ?
K(Pr+H3L)=0.78 ?

C28H36N2O14S2 L CAS 84162-07-2 (7948)
15,15'-Dithiobis[2,3,5,6,8,9,11,12-octahydro-16-nitro-1,4,7,10,13-benzopentaoxacycl
opentadecin]

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

Pr+++ sp non-aq 25°C 100% C T H 1997LQa (104792)1155

K(PrNO3+L)=3.15
Medium: acetonitrile. data for 20-35 C. DH(PrNO3+L)=28.89 kJ mol-1.

C28H40N4O4 H2L CAS 138110-63-1 (8608)
7,14-Dimethyl-5,12-diphenyl-1,4,8,11-tetraazacyclotetradecane-1,8-diethanoic acid;

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

Pr+++ gl KCl 40°C 0.50M M K1=9.09 1997BZa (104827)1156

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

Pr+++ gl non-aq 25°C 100% U K1=4.79 1980MDb (104848)1157
Medium: Propylene carbonate.

Medium: propylene carbonate

C28H40O10 L DiBz-30-crown10 CAS 104946-67-0 (1776)
2,3:17,18-Dibenzo-1,4,7,10,13,16,19,22,25,28-decaoxacyclotriaconta-2,17-diene;

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

Pr+++ ISE non-aq 25°C 100% U K1=4.12 1982MDa (104901)1158
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

Pr+++ gl diox/w 30°C 75% U I K1=8.52 1983RRa (105408)1159
In 75% MeOH: K1=6.95; 75% DMF: 5.74

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

Pr+++ sp diox/w 25°C 100% C 1997KMa (105635)1160
(La(NO3)3+L)=4.11

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

Pr+++ nmr KCl 25°C 1.0M C H K1=1.99 2004BRa (105973)1161
Method: 1H nmr measurements in D2O. DH(K1)=18 kJ mol-1
DS(K1)=99 J mol-1K-1

C36H32O24S4 H8L CAS 171798-10-0 (9139)
 25,26,27,28-Tetrakis(hydroxycarbonylmethoxy)calix[4]arene-5,11,17,23-tetrasulfonic acid;

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

 Pr+++ cal oth/un 25°C 0.01M C H K1=3.97 2004LWa (106230)1162
 Medium: 0.01 M HCl. DH(K1)=4.5 kJ mol⁻¹, DS(K1)=91.3 J K⁻¹ mol⁻¹.

 C36H54O12 L (6732)
 1,8-Dioxooctamethylenebis(4'-2,3-benzo-1,4,7,10,13-pentaoxacyclopentadecane);

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

 Pr+++ dis non-aq 25°C 100% U 1993INa (106425)1163
 B(Pr+3P+2L)=8.97

By solvent extraction into dichloromethane. B is the extraction constant
 Pr(aq)+picrate(aq)+L(org)=PrL2P3(org).

 C36H60O30 L a-Cyclodextrin CAS 10016-20-3 (6946)
 alpha-Cyclodextrin, Cyclohexaamylose;

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

 Pr+++ gl NaCl 25°C 0.10M U I K1=2.91 1999FBa (106470)1164
 In 0.1 M Me4NCl, K1=3.25.

 C37H33N5O4 L (7366)
 2,6-Bis(1-(3,5-dimethoxybenzyl)benzimidazol-2-yl)pyridine

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

 Pr+++ gl non-aq 25°C 100% C K2=4.9 1997PBa (106552)1165
 K3=2.8

Medium: CH3CN; 0.1 M Et4NClO4

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

 Pr+++ gl NaClO4 30°C 0.10M U 1980NAb (106616)1166
 K(Pr+H3L)=4.09
 K(Pr+H2L)=6.27
 K(PrH2L+H)=4.97

Also data for PrHnL(OH) species

C46H58O6 HL (6716)
 Calix[4]arene-0(1)-ethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	alc/w	25°C	0.01M	C			K1=19.70 B(PrHL)=31.23 B(PrH3L)=45.77 B(Pr2L)=31.5 B(PrH-1L)=20.6	1997ACa (107297)	1167

Medium: methanol, 0.01 M NEt4ClO4. Also data for many other calixarenes with mixed functionalities.

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
Pr+++	gl	non-aq	25°C	100%	C			K3=5.5	1997PBa (107318)	1168

Medium: CH3CN; 0.1 M Et4NClO4

C48H60O8 H2L R-Bu-Calixarene CAS 147513-53-9 (6705)
4-tert-Butylcalix[4]arene dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	alc/w	25°C	0.01M	C			K1=14.91 B(PrHL)=18.67 B(PrH-1L)=8.8	1997ACa (107405)	1169

Medium: methanol, 0.01 M NEt4ClO4. Also data for many other calixarenes with mixed functionalities.

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
Pr+++	cal	non-aq	25°C	100%	U	H		K1=4.62	2001NJa (107706)	1170

Method: microcalorimetry. Medium: MeCN.. DH(K1)=-172 kJ mol⁻¹

C76H116N4O8 L (8156)
p-tert-Butylcalix(4)arene tetra diisopropylethanoamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	cal	non-aq	25°C	100%	U	H		K1=3.67	2001NJa (107883)	1171

Method: microcalorimetry. Medium: MeCN.. DH(K1)=-109 kJ mol⁻¹

Polymer HL Bleomycin (2324)
Bleomycin A2, B2 etc.

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

Pr+++ sp oth/un 25°C ? U 1980LPb (108093)1172
K1eff=3.20 pH 6.8

Method: fluorescence

REFERENCES

- 2004BRa F Bravard, C Rosset, P Delangle; J.Chem.Soc.,Dalton Trans.,2012 (2004)
2004LBb Y Luo,R Byrne; Geochim.Cosmo.Acta,68,691 (2004)
2004LLa Y Lu,G Laurent,H Pereira; Talanta,62,959 (2004)
2004LMa Y Luo,F Millero; Geochim.Cosmo.Acta,68,4301 (2004)
2004LWa Y Liu,H Wang,L Wang,H Zhang; Thermochim.Acta,414,65 (2004)
2004MIa I Matsubayashi,E Ishiwata,Y Hasegawa; Talanta,63,625 (2004)
2004SBb J Schijf,R Byrne; Geochim.Cosmo.Acta,68,2825 (2004)
2004SGa I Sukhno,M Gavriluyk et al; Koord.Khim.,30,555 (2004)
2003DCa A De Namor,S Chahine,O Jafou,K Baron; J.Coord.Chem.,56,1245 (2003)
2003GSb B Garg,B Singh,D Kumar,P Singh; Indian J.Chem.,42A,79 (2003)
2003MBA A Mohamed,M Bakr,K El-Fattah; Thermochim.Acta,405,235 (2003)
2003MYd Y Mejia-Radillo,A Yatsimirsky; Inorg.Chim.Acta,351,2003 (2003)
2003RSa J Ramirez-Garcia,M Solache-Rios;; J.Solution Chem.,32,879 (2003)
2003SBa I Sukhno,V Buzko et al; Zh.Neorg.Khim.,48,576 (2003)
2003ZRa J Zolgharnein,F Riahi,S Amani; J.Inclusion Phenom.,45,13 (2003)
2002BBh E Bentouhami,G Bouet,M Khan; Talanta,57,545 (2002)
2001AAb Z Anwar,H Azab; J.Chem.Eng.Data,46,613 (2001)
2001GYb P Gomez-Tagle,A Yatsimirsky; Inorg.Chem.,40,3786 (2001)
2001NJa A D de Namor,O Jafou; J.Phys.Chem.B,105,8018 (2001)
2001SBF J Schijf,R Byrne; Geochim.Cosmo.Acta,65,1037 (2001)
2001WZa Z-M Wang,Z-F Zhou,H-K Lin; Acta Chimica Sinica,59,701 (2001)
2000ANA V Athawale,S Nerkar; Monatsh.Chem.,131,267 (2000)
2000CDa C Comuzzi,P Di Bernardo,M Tolazzi; Polyhedron,19,2427 (2000)
2000GBa S Giroux,P Rubini,B Henry,S Aury; Polyhedron,19,1567 (2000)
2000GRa S Giroux,P Rubini,C Gerardin,C Selve; New J.Chem.,24,173 (2000)
2000KBA G Klungness,R Byrne; Polyhedron,19,99 (2000)
2000LBA Y Luo,R Byrne; J.Solution Chem., 29,1089 (2000)
2000SBb L Sarka,I Banyai,E Brucher; J.Chem.Soc.,Dalton Trans.,3699 (2000)
2000TBb O Teslyuk,S Bel'tyukova et al.; Zh.Neorg.Khim.,45,2103 (2000)
1999FBa N Fatin-Rouge,J-C Bunzli; Inorg.Chim.Acta,293,53 (1999)
1999HLb V Hietapelto,R Laitinen,J Pursiainen; Acta Chem.Scand.,53,7 (1999)
1999SBc J Schijf,R Byrne; Polyhedron,18,2839 (1999)
1998BMb C Bonal,J-P Morel,N Morel-Desrosiers; J.Chem.Soc.,Faraday Trans.,94,1431
(1998)
1998CCb C Chang,Y-H Chen,H-Y Chen,F-K Shieh; J.Chem.Soc.,Dalton Trans.,3243
(1998)
1998LBb X Liu,R Byrne; J.Solution Chem., 27,803 (1998)
1998LBC Y Liu,X Bai,Y Inoue,M Ouchi; J.Phys.Chem.B,102,4871 (1998)
1998LHa Y Liu,B Han,Z Zhang,J Guo, Y.Chen; Thermochim.Acta,317,1 (1998)
1998PAa V Panyushkin,N Achrimenko,A Khachatrian; Polyhedron,17,3053 (1998)
1998SUa T Sasaki,S Umetani,M Matsui; Bull.Chem.Soc.Jpn.,71,371 (1998)

- 1998YHa S Yajima, Y Hasegawa; *Bull. Chem. Soc. Jpn.*, 71, 2825 (1998)
- 1997ACa F Arnaud-Neu, S Cremin, S Harris, et al.; *J. Chem. Soc., Dalton Trans.*, 329 (1997)
- 1997BZa J-H Bi, X-D Zhao, S-S Ni, F-X Xie; *Chem. J. of Chin. Univ.*, 18, 1251 (1997)
- 1997EIa M Eid; *J. Indian Chem. Soc.*, 74, 97 (1997)
- 1997GMa F Gao, Y-T Ma, C-J Niu, J-Z Ni; *Chem. J. of Chin. Univ.*, 18, 1929 (1997)
- 1997GSa P Gurkan, N Sari; *Talanta*, 44, 1935 (1997)
- 1997HTb Y Hasegawa, K Takashima, F Watanabe; *Bull. Chem. Soc. Jpn.*, 70, 1047 (1997)
- 1997IHa Y Issa, W Hegazy; *J. Indian Chem. Soc.*, 74, 542 (1997)
- 1997KMa M Kuznetsov, Y Medvedev; *Koord. Khim.*, 23, 223 (1997)
- 1997LBb B Li, R Byrne; *Aquatic Geochem.*, 3, 99 (1997)
- 1997LBd X Liu, R Byrne; *Geochim. Cosmo. Acta*, 61, 1625 (1997)
- 1997LQa Y Liu, A-D Qi, R-T Chen, Y-M Zhang; *Acta Chimica Sinica*, 55, 1091 (1997)
- 1997PBa S Petoud, J-C Bunzli, F Renaud et al; *Inorg. Chem.*, 36, 5750 (1997)
- 1997PPb S Patnaik, C Panda; *J. Indian Chem. Soc.*, 74, 494 (1997)
- 1997RPa F Renaud, C Piguet, J-C Bunzli; *Chem. Eur. J.*, 3, 1660 (1997)
- 1997RPb F Renaud, C Piguet, J-C Bunzli; *Chem. Eur. J.*, 3, 1646 (1997)
- 1996ADa N Atanova, N Dobrynina, Y Kiryanov et al; *Zh. Neorg. Khim.*, 41, 245 (1996)
- 1996ALa V Athawale, V Lele; *J. Chem. Eng. Data*, 41, 1015 (1996)
- 1996BJa L Burai, S Jakab, R Kiraly, I Lazar, I Toth; *J. Chem. Soc., Dalton Trans.*, 1113 (1996)
- 1996DAb N Darwish, N Abdel-Ghani, Y Issa, A Tawansi; *J. Indian Chem. Soc.*, 73, 103 (1996)
- 1996HYa Y Hasegawa, N Yamazaki, S Usui; *Bull. Chem. Soc. Jpn.*, 69, 2169 (1996)
- 1996KDb V Kolhe, K Dwivedi; *J. Indian Chem. Soc.*, 73, 133 (1996)
- 1996KDC V Kolhe, K Dwivedi; *J. Indian Chem. Soc.*, 73, 265 (1996)
- 1996KDD V Kolhe, K Dwivedi; *J. Indian Chem. Soc.*, 73, 678 (1996)
- 1996KNa M Ahmed, S Ahmed, M Saeed, M Iqbal; *Radioanal. Nucl. Chem. Lett.*, 212, 269 (1996)
- 1996PJa A Patel, J Joshi; *J. Indian Chem. Soc.*, 73, 71 (1996)
- 1996PPa N Patel, M Patel, J Joshi; *J. Indian Chem. Soc.*, 73, 69 (1996)
- 1996SNa P Sawalakhe, M Narwade; *J. Indian Chem. Soc.*, 73, 347 (1996)
- 1996SZa U Schilbach, K Zwietasch; *Monatsh. Chem.*, 127, 265 (1996)
- 1996YLa R Yanping, Z Li, Y Kaiyu, W Liufang; *Polyhedron*, 15, 2231 (1996)
- 1995BIa J-H Bi; *Chem. J. of Chin. Univ.*, 16, 674 (1995)
- 1995HAA V Hietapelto, R Anttila et al; *J. Alloys and Compounds*, 225, 312 (1995)
- 1995IFa Y Issa, H Fattah, M Omar, A Soliman; *Monatsh. Chem.*, 126, 163 (1995)
- 1995KDb V Kolhe, K Dwivedi; *Asian J. Chem.*, 7, 568 (1995)
- 1995KDC V Kolhe, K Dwivedi; *Asian J. Chem.*, 7, 347 (1995)
- 1995KDD V Kolhe, K Dwivedi; *J. Electrochem. Soc. India*, 44, 211 (1995)
- 1995KMa M Kuznetsov, Y Medvedev et al; *Zh. Neorg. Khim.*, 40, 1307 (1995)
- 1995MTa S Meshkova, Z Topilova et al; *Zh. Neorg. Khim.*, 40, 1346 (1995)
- 1995PAa V Panushkin, N Akhrimenko; *Koord. Khim.*, 21, 747 (1995)
- 1995PJB A Patel, J Joshi; *J. Indian Chem. Soc.*, 72, 471 (1995)
- 1995SSd G Sengupta, P Sanyal, N Ghosh; *J. Indian Chem. Soc.*, 72, 547 (1995)
- 1994CRa G Choppin, E Rizkalla, T El-Ansi et al; *J. Coord. Chem.*, 31, 297 (1994)
- 1994FCa S Frey, C Chang, J Carvalho et al; *Inorg. Chem.*, 33, 2882 (1994)
- 1994KDa V Kolhe, K Dwivedi; *Oriental J. Chem.*, 10, 150 (1994)
- 1994LZa Q-H Luo, S-R Zhu, M-C Chen, S-Y Yu et al; *J. Chem. Soc., Dalton Trans.*, 1873 (1994)

- 1994SOa B Satyanarayana, K Omprakash, A Pal; *J. Indian Chem. Soc.*, 71, 625 (1994)
1994SSa J Shukla, R Sharma; *Monatsh. Chem.*, 125, 247 (1994)
1994TBb E Toth, E Brucher; *Inorg. Chim. Acta*, 221, 165 (1994)
1993ALa R Anttila, L Lajunen et al; *Acta Chem. Scand.*, 47, 535 (1993)
1993ATa Y Agrawal, P Thomaskutty; *Indian J. Chem.*, 32A, 277 (1993)
1993CCb A Cassol, G Choppin, P di Bernardo et al; *J. Chem. Soc., Dalton Trans.*, 1695 (1993)
1993EEa A El-Ansary, W El-Hawary, A Atwa; *Indian J. Chem.*, 32A, 913 (1993)
1993FKb F Firsching, J Kell; *J. Chem. Eng. Data*, 38, 132 (1993)
1993INa Y Inoue, K Nakagawa, T Hakushi; *J. Chem. Soc., Dalton Trans.*, 1333, 2279 (1993)
1993LLa Y Liu, T-B Lu, M-Y Tan, T Hakushi et al; *J. Phys. Chem.*, 97, 4548 (1993)
1993LLb Y Liu, T-B Lu, M-Y Tan; *Acta Chimica Sinica*, 51, 874 (1993)
1993MLa N Morel-Desrosiers, C Lhermet, J Morel; *J. Chem. Soc., Faraday Trans.*, 89, 1223 (1993)
1993RAa A Ramadan, M A-Moez et al; *Monatsh. Chem.*, 124, 647 (1993)
1993SMb P Sadowski, M Majdan; *Monatsh. Chem.*, 124, 7 (1993)
1993VLa S Verma, S Limaye, M Saxena; *Indian J. Chem.*, 32A, 545 (1993)
1993YNa T Yao, S Ni, J Xu; *J. Inorg. Chem. (China)*, 9, 77 (1993)
1993YTa A Yuchi, A Tanaka, M Hirai, T Ysai et al; *Bull. Chem. Soc. Jpn.*, 66, 3377 (1993)
1992CBa A Cassol, P di Bernardo, R Portanova; *J. Chem. Soc., Dalton Trans.*, 469 (1992)
1992FIa F Firsching; *J. Chem. Eng. Data*, 37, 497 (1992)
1992GRa P Grant, P Robouch, R Torres, P Baisden et al; *J. Solution Chem.*, 21, 213 (1992)
1992MBb A M-Tang, J Bunzli; *Inorg. Chim. Acta*, 192, 201 (1992)
1992RAD P Reddy, T Adharani et al; *Indian J. Chem.*, 31A, 855 (1992)
1992SAa J Shukla, S Arora; *Bull. Soc. Chim. Fr.*, 129, 247 (1992)
1992SSc Sahadev, R Sharma et al; *Monatsh. Chem.*, 123, 25, 883, 1099 (1992)
1992YNa M Yamamoto, N Nakasuka, M Tanaka; *Bull. Chem. Soc. Jpn.* 65, 1566 (1992)
1992ZNa Y-F Zhang, C-J Niu, J-Z Ni; *Acta Chimica Sinica*, 50, 135 (1992)
1991ADb R Ahuja, K Dwivedi; *J. Indian Chem. Soc.*, 68, 643 (1991)
1991BPb T Baranova, S Pirkes, A Bugayevskii; *J. Chem. Thermodyn.*, 23, 543 (1991)
1991DTa B Dash, P Tripathy et al; *Monatsh. Chem.*, 122, 341 (1991)
1991DWb R Deng, J Wu et al; *Chem. J. of Chin. Univ.*, 12, 853 (1991)
1991FBa F Firsching, S Brune; *J. Chem. Eng. Data*, 36, 93 (1991)
1991HJa X Huang, B Jiang, J Yin; *Acta Chimica Sinica*, 49, 359 (1991)
1991HKf M Hynes, J Keely, E Lee et al; *J. Chem. Soc., Perkin Trans. II*, 363 (1991)
1991ITa S-I Ishiguro, R Takahashi; *Inorg. Chem.*, 30, 1854 (1991)
1991MOa C Monk; *J. Chem. Soc., Dalton Trans.*, 1479 (1991)
1991NNb J Narkhede, G Natrajan, S Sangal; *J. Indian Chem. Soc.*, 68, 400 (1991)
1991SKb K Sawada, M Kuribayashi, T Suzuki, Miyamoto; *J. Solution Chem.*, 20, 829 (1991)
1991WPb J Westrenen, J Peters, H Bekkum et al; *Inorg. Chim. Acta*, 181, 233 (1991)
1990ATa N Abdel-Ghani, A Tawansi et al; *Bull. Soc. Chim. Fr.*, 127, 188 (1990)
1990CBe A Cassol, P di Bernardo, P Zanonato; *Inorg. Chim. Acta*, 171, 217 (1990)
1990DOb M Devdas, K Omprakash et al; *Indian J. Chem.*, 29A, 192 (1990)
1990HLa T-M Hseu, K-L Liu; *J. Chin. Chem. Soc. (Taipei)*, 37, 237 (1990)
1990HYa Y Hasegawa, N Yamazaki, S Usui, G Choppin; *Bull. Chem. Soc. Jpn.*, 63, 2169 (1990)
1990KMF B Kale, T Mhaske; *J. Indian Chem. Soc.*, 67, 901 (1990)
1990LSb S Limaye, M Saxena; *J. Indian Chem. Soc.*, 67, 162 (1990)
1990MOc H Mohamed, M Omar, Y Issa; *Monatsh. Chem.*, 121, 351 (1990)

1990NIa K Nakagawa,Y Inoue,T Hakushi; J.Chem.Res.(S),348 (1990)
1990NKd K Nema,F Khan; J.Indian Chem.Soc.,67,675 (1990)
1990NRa A Danil de Namor,M Ritt et al; J.Chem.Soc.,Faraday Trans.,86,89 (1990)
1990PLa E Proskurina,E Lebedeva et al; Zh.Neorg.Khim.,35,1908 (1088) (1990)
1990RSc P Reddy,K Sudhakar; Indian J.Chem.,29A,158 (1990)
1990RSe P Reddy,K Sudhakar; Indian J.Chem.,29A,1182 (1990)
1990TPb R Torres,C Palmer et al; Anal.Chem.(USA),298 (1990)
1990TSa S Tabassum,K Siddiqi et al; Indian J.Chem.,29A,82 (1990)
1989BPa J-C Bunzli,F Pilloud; Inorg.Chem.,28,2638 (1989)
1989Cmb J Charlier,E Merciny; Anal.Chim.Acta,220,187 (1989)
1989Cpc L Ciavatta,R Porto,E Vasca; Polyhedron,8,983,2701 (1989)
1989GDa B Garg,R Dixit,N Kiran,J Sharma; Bull.Soc.Chim.Fr.,I,168 (1989)
1989HMa Y Hasegawa,Y Morita,M Hase et al; Bull.Chem.Soc.Jpn.,62,1486 (1989)
1989LWa N Li,O Wahlberg,I Puigdomenech; Acta Chem.Scand.,43A,331 (1989)
1989MFa G Makoushova,B Feifel et al; Zh.Neorg.Khim.,34,628(349) (1989)
1989MJa M Menon,J James; J.Chem.Soc.,Faraday Trans.I,85,2683 (1989)
1989MJb M Menon,J James; J.Solution Chem.,18,735 (1989)
1989MJc M Menon,J James,R Abbas; J.Radioanal.Nucl.Chem.,129,133 (1989)
1989NDa R Nagar,P Dwivedi,R Sharma; Indian J.Chem.,28A,722 (1989)
1989NOb M Rao,K Omprakash; Indian J.Chem.,28A,174 (1989)
1989OKb E Ohyoshi,S Kohata; Polyhedron,8,1561 (1989)
1989PEa R Petrola; Finn.Chem.Lett.,16,29 (1989)
1989SBb E Samokhvalova,A Borisova et al; Zh.Neorg.Khim.,34,2538 (1989)
1989SHa G Sharma; Indian J.Chem.,28A,340 (1989)
1989SPa D Sawyer,J Powell; Polyhedron,8,1425 (1989)
1989SVa S Singh,B Verma,L Pandey; Bull.Soc.Chim.Fr.,I,26 (1989)
1989YSa I Yoshida,F Sagara,K Ueno; Bull.Chem.Soc.Jpn.,62,2296 (1989)
1989ZPa T Zakharova,S Pirkes et al; Zh.Neorg.Khim.,34,44(25) (1989)
1988BCd A Bandopadhyay,A Chaudhury; Indian J.Chem.,27A,332 (1988)
1988CCb C Chang,P H-L Chang,S-Y Qin; Inorg.Chem.,27,944 (1988)
1988CCc C Chang,P H-L Chang et al; Inorg.Chem.,27,3786 (1988)
1988CLb G Choppin,Q Liu,E Rizkalla; Inorg.Chim.Acta,145,309 (1988)
1988ESb B El-Shetary,S Stefan et al; Can.J.Chem.,66,2362 (1988)
1988GBa P Grant,P Baisden et al; Inorg.Chem.,27,1156 (1988)
1988GSa B Garg,S Singh,R Basnet et al; Polyhedron,7,147 (1988)
1988HSa Y Hasegawa,T Sugawara,G Choppin; Inorg.Chim.Acta,143,277 (1988)
1988KTa R Kiraly,I Toth,L Zekany,E Brucher; Acta Chim.Acad.Sci.Hung.,125,519
(1988)
1988LLa L Lajunen,M Lajunen,G Choppin et al; Inorg.Chim.Acta,147,127 (1988)
1988MIa P M Milyukov; Izv.Vysh.Uchebn.Zaved.Khim.,31,23 (1988)
1988MKd M Mayadeo,S Kale; Indian J.Chem.,27A,454 (1988)
1988NOa A Nagendram,K Omprakash,A Pal,M Reddy; Indian J.Chem.,27A,267 (1988)
1988OHa E Ohyoshi; Bull.Chem.Soc.Jpn.,61,689 (1988)
1988RNa E Rizkalla,C Niu,G Choppin; Inorg.Chim.Acta,146,135 (1988)
1988SJB W Szczepaniak,B Juszkowiak,W Ciszewska; Inorg.Chim.Acta,147,261 (1988)
1988SSd I Svetlova,N Smirnova et al; Zh.Neorg.Khim.,33,1135(643) (1988)
1988TRb A Taha,A Ramadan,M Abdel-Moez et al.; Acta Chim.Acad.Sci.Hung.,125,3
(1988)
1988VSc S Verma,M Saxena; Indian J.Chem.,27A,1068 (1988)
1988YSa I Yoshida,F Sagara,and K Ueno; Bull.Chem.Soc.Jpn.,61,2639 (1988)

1988ZTa I Zheltvai, M Tischenko, Z Hafagy; Zh. Neorg. Khim., 33, 592(333) (1988)
1987BCd A Bandopadhyay, A Chaudhury; Indian J. Chem., 26A, 853 (1987)
1987CMe J Charlier, E Merciny, J Fuger; Anal. Chim. Acta, 192, 95 (1987)
1987DDc D Deolankar, Y Deshpande; Indian J. Chem., 26A, 68 (1987)
1987DGB R Dixit, B Garg; Monatsh. Chem., 118, 1113 (1987)
1987DGC R Dixit, B Garg; Monatsh. Chem., 118, 1237 (1987)
1987DGD R Dixit, B Garg; Indian J. Chem., 26A, 80 (1987)
1987ECa P Ettaiah, K Charyulu, K Omprakash et al; Indian J. Chem., 26A, 437 (1987)
1987ESa R El-Shetary, S Stefan, E Zidan; Monatsh. Chem., 118, 1101 (1987)
1987GBa B Garg, R Basnet, S Singh; Bull. Soc. Chim. Fr., II, 948 (1987)
1987HCa T Hseu, C Chang, Z Lin; J. Chin. Chem. Soc. (Taipei), 34, 187 (1987)
1987KSc L Khan, Siddiqi, N Khan, Kursehy, Zaidi; Indian J. Chem., 26A, 969 (1987)
1987LSc S Limaye, M Saxena; J. Indian Chem. Soc., 64, 657 (1987)
1987MSa C Melios, J Souza-Campos et al; Inorg. Chim. Acta, 139, 163 (1987)
1987PEa R Petrola; Ann. Acad. Sci. Fennicae, 215 (1987)
1987PLa R Petrola, P Lampen, S Lindroos; Talanta, 34, 445 (1987)
1987PPa M Philip, M Peerzada, J Joshi; J. Indian Chem. Soc., 64, 436 (1987)
1987RRc P Reddy, P Reddy, M Reddy; Proc. Indian Acad. Sci., 99, 297 (1987)
1987RSc M Rao, B Sethuram, T Rao; Bull. Soc. Chim. Belges, 96, 245 (1987)
1987SMd S Shetty, N Mahadevan, R Sathe; Indian J. Chem., 26A, 76 (1987)
1987SOa B Satyarayana, K Omprakash et al; Indian J. Chem., 26A, 710 (1987)
1987SSb Sahadev, R Sharma, S Sindhvani; Indian J. Chem., 26A, 82 (1987)
1987TSb S Tabassum, K Siddiqi, N Khan, R Kureshy; Indian J. Chem., 26A, 489, 523 (1987)
1987VSA S Verma, M Saxena; J. Indian Chem. Soc., 64, 725 (1987)
1987VSB S Verma, M Saxena; Proc. Indian Acad. Sci., 99, 217 (1987)
1987WLa A Wojciechowska, L Lomozik et al; Monatsh. Chem., 118, 1317 (1987)
1987YJa J Yin, B Jiang, T Sun, H Sun; J. Inorg. Chem. (China), 3, 69 (1987)
1987ZAa H Zineddine, M Asso, D Benlian; Inorg. Chim. Acta, 140, 375 (1987)
1986AJc B Arbad, D Jahagirdar; Indian J. Chem., 25A, 557 (1986)
1986ALa F Arnaud-Neu, E Loufouilou et al; J. Chem. Soc., Dalton Trans., 2629 (1986)
1986BDa P Barthelemy, J Desreux, J Massaux; J. Chem. Soc., Dalton Trans., 2497 (1986)
1986CDB G Choppin, A Dadgar, E Rizkalla; Inorg. Chem., 25, 3581 (1986)
1986CLc G Choppin, L Lajunen; Inorg. Chem., 25, 3512 (1986)
1986COB C Chang, V Ochaya; Inorg. Chem., 25, 355 (1986)
1986FMA F Firsching, J Mohammadzadel; J. Chem. Eng. Data, 31, 40 (1986)
1986GSb A Gahlot, S Shamar, R Mehta; Indian J. Chem., 25A, 386 (1986)
1986HMA F Hirsching, J Mohammadzadei; J. Chem. Eng. Data, 31, 40 (1986)
1986KHc F Khan; J. Indian Chem. Soc., 63, 519 (1986)
1986LCA L Lajunen, G Choppin; Inorg. Chim. Acta, 119, 83 (1986)
1986LLc L Lajunen, M Lajunen, G Choppin; Inorg. Chim. Acta, 119, 87 (1986)
1986LSb S Limaye, M Saxena; Can. J. Chem., 64, 865 (1986)
1986MIA M Masoud, N Ibrahim et al; Indian J. Chem., 25A, 389 (1986)
1986NBa M Naoum, B Barsoum; Indian J. Chem., 25A, 398 (1986)
1986PLb R Petrola, R Larja; Finn. Chem. Lett., 13, 177 (1986)
1986PLc J Powell, D Ling, P Tse; Inorg. Chem., 25, 585, 587 (1986)
1986RCa E Rizkalla, G Choppin, W D'Olieslager; Inorg. Chem., 25, 2327 (1986)
1986RMB P Reddy, V Rao; Inorg. Chim. Acta, 125, 191 (1986)
1986RSc M Rao, B Sethuram, T Rao; J. Indian Chem. Soc., 63, 663 (1986)
1986SGc K Sarkar, B Garg; Transition Met. Chem., 11, 326 (1986)
1986SKb N Skorik, A Kochmanek, O Voronkova; Zh. Neorg. Khim., 31, 1137(646) (1986)

1986SSc R Sharma,S Singh,S Sindhwani; Monatsh.Chem.,117,459 (1986)
1986SSd S Singh,R Sharma,S Sindhwani; Indian J.Chem.,25A,400 (1986)
1986XJa Xiao Wenjin, Ji Zhengping, Qin Zibin; Acta Chimica Sinica,704 (1986)
1986ZBa I Zheltvai, L Belevich, M Tischenko; Zh.Neorg.Khim.,31,2149(1239) (1986)
1985AAb L Asso, M Asso; Thermochem.Acta,87,373 (1985)
1985ANA S Ali, A Nassar et al; Indian J.Chem.,24A,537 (1985)
1985BBb P Becker, B Bilal; J.Solution Chem.,14,407 (1985)
1985ECa P Ettaiah, K Charyulu, A Pal, M Reddy; Indian J.Chem.,24A,890 (1985)
1985EEb B El-Shetary, G El-Inany, A El-Atrash; J.Chem.Soc.Pak.,7,17 (1985)
1985HWb T Hseu, S Wu, Z Lin; J.Chin.Chem.Soc.(Taipei),32,287 (1985)
1985JBa R Jonasson, G Bancroft, H Nesbitt; Geochim.Cosmo.Acta,49,2133 (1985)
1985KBb R Kiraly, E Brucher; J.Less Common Metals,112,227 (1985)
1985LBC S Lubkeova, P Balgavy et al; Chem.Zvesti,39,317 (1985)
1985LSa R Lenkinski, S Sierke; J.Inorg.Biochem.,24,59 (1985)
1985LSd S Limaye, M Saxena; J.Indian Chem.Soc.,62,572 (1985)
1985LSe S Limaye, M Saxena; J.Indian Chem.Soc.,62,352 (1985)
1985LSf S Limaye, M Saxena; J.Indian Chem.Soc.,62,576 (1985)
1985OHb E Ohyoshi; Bull.Chem.Soc.Jpn.,58,405 (1985)
1985PLa J Powell, D Ling; Inorg.Chem.,24,2967 (1985)
1985RSb A Ramadan, M Seada et al; Monatsh.Chem.,116,463 (1985)
1985SGa T Smirnova, I Gorelov, A Pavlov; Zh.Neorg.Khim.,30,551(310) (1985)
1985SNb L Sirotkova, P Novomesky, E Dvorakova; Chem.Zvesti,39,639 (1985)
1985TPa P Tse, J Powell; Inorg.Chem.,24,2727 (1985)
1984AFa M Albin, G Farber, W Horrocks; Inorg.Chem.,23,1648 (1984)
1984AIa S Ali, N Ibrahim et al; Indian J.Chem.,23A,1049 (1984)
1984APa Z Akhrymenko, V Panushkin, L Sydorenko; Koord.Khim.,10,1633 (1984)
1984BKc E Brucher, C Kukri, R Kiraly; Inorg.Chim.Acta,94,45 (1984)
1984GBa G Gillian, P Barthelemy et al; J.Chem.Soc.,Dalton Trans.,2847 (1984)
1984IDa S Iftekhar, K Dubey; J.Indian Chem.Soc.,61,702 (1984)
1984KCa F Khan, V Chitale, A Mahajani; J.Indian Chem.Soc.,61,165 (1984)
1984KKb A Kopyrin, E Komarov et al; Radiokhim.,26,303 (1984)
1984KPF T Krasovskaya, S Pirkes, A Molotkov; Zh.Neorg.Khim.,29,1964 (1984)
1984KTb R Kumar, S Tripathi, G Chaturvedi; Monatsh.Chem.,115,283 (1984)
1984LSd S Limaye, M Saxena; J.Indian Chem.Soc.,61,448 (1984)
1984LSe S Limaye, R Saxena; J.Indian Chem.Soc.,61,748 (1984)
1984MFa E Merciny, J Fuger; Anal.Chim.Acta,160,87 (1984)
1984MFb E Merciny, J Fuger; Anal.Chim.Acta,166,199 (1984)
1984MPc P Milyukov, N Polenova, N Mikhailova; Termodinamika i sroenie rastvorov,46
(1984)
19840Ha E Ohyoshi; Talanta,31,1129 (1984)
1984SGb R Saxena, A Gupta; Indian J.Chem.,23A,785 (1984)
1984SSd R Sindhu, R Singh; Monatsh.Chem.,115,993 (1984)
1984TPa P Tse, J Powell, M Potter et al; Inorg.Chem.,23,1437 (1984)
1984YLa Yao Kemin, Liu Min, Wang Guangren et al; Chem.J.of Chin.Univ.,603 (1984)
1983AGb Y Agrawal; Indian J.Chem.,22A,80 (1983)
1983ANb M-C Almasio, F Arnaud-Neu et al; Helv.Chim.Acta,66,1296 (1983)
1983ASa B Arbad, D Shelke, D Jahagirdar; Indian J.Chem.,22A,124 (1983)
1983CRb C Chang, M Rowland; Inorg.Chem.,22,3867 (1983)
1983KBd Y Kozlov, V Babich et al; Zh.Obshch.Khim.,53,1606 (1983)
1983KMB F Khan, A Mahajani; J.Indian Chem.Soc.,60,295 (1983)

1983MAa J Mossoyan, M Asso, D Benlian; *J. Magn. Reson.*, 55, 188 (1983)
1983MCC J Morrison, W Cleland; *Biochemistry*, 22, 5507 (1983)
1983MPC N Mohanty, R Patnaik; *Indian J. Chem.*, 22A, 820 (1983)
1983MSC J Majer, L Sirotkova, I Valaskova; *Chem. Zvesti*, 37, 183 (1983)
1983PMA S Pirkes, G Makushova et al; *Zh. Neorg. Khim.*, 28, 2969(1684) (1983)
1983PSC R Pizer, R Selzer; *Inorg. Chem.*, 22, 1359 (1983)
1983RRa E Rizkalla, A Ramadan et al; *Polyhedron*, 2, 1155 (1983)
1983RSa A Ramadan, M Seada; *Talanta*, 30, 245 (1983)
1983SDa R Saxena, S Dhawan; *Indian J. Chem.*, 22A, 89 (1983)
1982AGa M Asso, G Granier, J van Rietschoten; *J. Chim. Phys.*, 79, 455 (1982)
1982BBC K Burkov, E Busko, I Pichugina; *Zh. Neorg. Khim.*, 27, 643(362) (1982)
1982CBC G Choppin, P Bertrand, Y Hasegawa et al; *Inorg. Chem.*, 21, 3722 (1982)
1982DBa S Dubey, B Bhuyan; *Indian J. Chem.*, 21A, 442 (1982)
1982GMB S Garg, S Mukherjee, B Garg, R Singh; *J. Indian Chem. Soc.*, 59, 1038 (1982)
1982HMA S Hassan, W Mahmoud; *Anal. Chem. (USA)*, 54, 228 (1982)
1982KKc A Kapustnirov, Yu Kozlov, I Gorelov; *Zh. Obshch. Khim.*, 52, 663 (1982)
1982KNa H Kojima, H Nonaka, M Hirota; *Bull. Chem. Soc. Jpn.*, 55, 2988 (1982)
1982LMA K Lal, S Malhotra; *Indian J. Chem.*, 21A, 1007 (1982)
1982LPC A Lapitskaya, S Pirkes et al; *Zh. Neorg. Khim.*, 27, 2148(1215) (1982)
1982LSa S Limaye, M Saxena; *J. Indian Chem. Soc.*, 59, 916 (1982)
1982MAa V Mironov, N Avramenko et al; *Koord. Khim.*, 8, 636 (1982)
1982Mab J Mossoyan, M Asso, D Benlian; *J. Magn. Reson.*, 46, 289 (1982)
1982MBA M Mayadeo, S Bhattacharjee; *J. Indian Chem. Soc.*, 59, 800 (1982)
1982MDa J Massaux, J Desseux; *J. Am. Chem. Soc.*, 104, 2967 (1982)
1982MPd V Mischenko, N Poluekerov, L Ovchar; *Zh. Neorg. Khim.*, 27, 1397(787) (1982)
1982MSC K Mehta, K Sharma, R Mehta; *Indian J. Chem.*, 21A, 656 (1982)
19820Ca K Omprakash, A Chandra, M Reddy; *Indian J. Chem.*, 21A, 322 (1982)
1982PPd J Powell, M Potter, H Burkholder, E Potter; *Polyhedron*, 1, 277 (1982)
1982RFa E Riecaniska, E Fuleova, J Majer; *Chem. Zvesti*, 36, 501 (1982)
1982SLb S Swamy, P Lingaiah; *Indian J. Chem.*, 21A, 654 (1982)
1981BBE J Burns, C Baes; *Inorg. Chem.*, 20, 616 (1981)
1981BDa B Bhuyan, S Dubey; *Indian J. Chem.*, 20A, 756 (1981)
1981BDC B Bhuyan, S Dubey; *J. Indian Chem. Soc.*, 58, 613 (1981)
1981EIA S Etaiw, G El-Inany et al; *J. Inorg. Nucl. Chem.*, 43, 1920 (1981)
1981FCa F Firsching, R Cuca; *J. Chem. Eng. Data*, 26, 116 (1981)
1981GCa Gao Hongcheng, Chen Dian, Wu Jinguang etc; *Chem. J. of Chin. Univ.*, 417 (1981)
1981GMA D Graddon, L Muir; *J. Chem. Soc., Dalton Trans.*, 2434 (1981)
1981JPa D Jalon-Dalmaïs, M Petit-Ramel; *Compt. Rend.*, 292, Ser. II, 833 (1981)
1981KFa M Kawashima, H Freiser; *Anal. Chem. (USA)*, 53, 284 (1981)
1981KJa A Kothari, R Jain, A Ahmed et al; *J. Inorg. Nucl. Chem.*, 43, 2905 (1981)
1981KSe R Kumar, R Sharma, G Chaturvedi; *J. Inorg. Nucl. Chem.*, 43, 2503 (1981)
1981KTb R Kiraly, I Toth, E Brucher; *J. Inorg. Nucl. Chem.*, 43, 345 (1981)
1981MBb S Mathur, C Bhandari; *Pol. J. Chem.*, 55, 285 (1981)
1981MCb A Malinowska, D Sulikowska; *Pol. J. Chem.*, 55, 963 (1981)
1981MTc G Makushova, T Ternovaya et al; *Koord. Khim.*, 7, 372 (1981)
1981NSc V Novak, M Svicekova et al; *Chem. Zvesti*, 35, 481 (1981)
1981RSb V Reddy, B Sethuram, T Rao; *Indian J. Chem.*, 20A, 1140 (1981)
1981SGd R Saxena, A Gupta; *J. Indian Chem. Soc.*, 58, 1157 (1981)
1981SGf R Sandhu, J Ghandhi, R Kumar; *Thermochim. Acta*, 47, 117 (1981)
1981SKb R Saxena, G Khandelwal; *Indian J. Chem.*, 20A, 536 (1981)

1981ZLa S Zielinski, L Lomozik et al; *Monatsh.Chem.*, 112, 1245 (1981)
1980BDd B Bhuyan, S Dubey; *J.Indian Chem.Soc.*, 57, 289 (1980)
1980CCa G Choppin, R Cannon; *Inorg.Chem.*, 19, 1889 (1980)
1980KBc Y Kozlov, V Babich; *Zh.Neorg.Khim.*, 25, 2852(1574) (1980)
1980KKf N Kostromina, G Kholodnaya, A Kirillov; *Koord.Khim.*, 6, 532 (1980)
1980KTb R Kumar, S Tripathi et al; *Indian J.Chem.*, 19A, 1217 (1980)
1980LPb R Lenkinski, B Pearce et al; *J.Am.Chem.Soc.*, 102, 7088 (1980)
1980MDb J Massaux, J Desreux, C Delchambre et al; *Inorg.Chem.*, 19, 1893 (1980)
1980MGc G Makhmeeva, V Gontar et al; *Zh.Neorg.Khim.*, 25, 855(467) (1980)
1980MMe L Martynenko, N Muratova, A Borisova; *Zh.Neorg.Khim.*, 25, 713(591) (1980)
1980NAb R Nayan; *J.Inorg.Nucl.Chem.*, 42, 1743 (1980)
1980NSf T Nakano, Y Suzuki; *Nippon Kagaku Kaishi*, 10, 1485 (1980)
1980PPf C Panda, R Patnaik; *J.Indian Chem.Soc.*, 57, 23 (1980)
1980RPa E Riccankk, Z Pikulikova, J Majer; *Chem.Zvesti*, 34, 190 (1980)
1980RTa H Rana, J Tandon; *Indian J.Chem.*, 19A, 279 (1980)
1980SBb R Saxena, S Bansal; *Electrochim.Acta*, 25, 1577 (1980)
1980SBc S Shilov, N Batyaev; *Zh.Neorg.Khim.*, 25, 409(223) (1980)
1980SDa A Samir, N Dobrynina et al; *Zh.Neorg.Khim.*, 25, 3250(1781) (1980)
1980Sdb A Samir, N Dobrynina et al; *Zh.Neorg.Khim.*, 25, 2977(1637) (1980)
1980SDc C Sharma, T De; *J.Less Common Metals*, 70, 63 (1980)
1980SGa J Sharma, B Garg, R Singh; *J.Inorg.Nucl.Chem.*, 42, 399 (1980)
1980Sgb T Smirnova, I Gorelov; *Zh.Neorg.Khim.*, 25, 2967(1631) (1980)
1980Ske R Sandhu, R Kalia; *J.Indian Chem.Soc.*, 57, 222 (1980)
1980SLb S Swamy, P Lingaiah; *Indian J.Chem.*, 19A, 493 (1980)
1980SSc R Shekhawat, N Sankhla, R Mehta; *Pol.J.Chem.*, 54, 391 (1980)
1980Vca P Volpe, A Chagas, C Airoidi; *J.Inorg.Nucl.Chem.*, 42, 1321 (1980)
1980ZMa S Zaidi, S Mukherjee; *J.Inorg.Nucl.Chem.*, 42, 455 (1980)
1979BEb A Borisova, A Evseev et al; *Zh.Neorg.Khim.*, 24, 1515(840) (1979)
1979DBb J Dumonceau, S Bigot, M Treuil; *Compt.Rend.*, 287C, 325 (1979)
1979HJa R Hancock, G Jackson et al; *J.Chem.Soc., Dalton Trans.*, 1384 (1979)
1979JMa I Zhel'tvai, E Melenteva, M Tischenko; *Zh.Neorg.Khim.*, 24, 1214(675) (1979)
1979KRb M Kotoucek, M Kucerova, J Lasovsky; *Coll.Czech.Chem.Comm.*, 44, 1559 (1979)
1979KSb A Kettrup, T Seshadri, M Cramer; *Talanta*, 26, 303 (1979)
1979KSc R Kumar, R Sharma, G Chaturvedi; *Monatsh.Chem.*, 110, 907 (1979)
1979LAb L Lajunen et al; *Finn.Chem.Lett.* 11 (1979)
1979LSb P Lehtonen et al; *Finn.Chem.Lett.* 53 (1979)
1979Mbc R Mehrotra, B Bachlas et al; *Indian J.Chem.*, 18A, 370 (1979)
1979MBd J Majer, P Butvin et al; *Chem.Zvesti*, 33, 742 (1979)
1979MMe N Muratova, L Martynenko; *Zh.Neorg.Khim.*, 24, 1543(855) (1979)
1979NDa S Nagpal, S Dubey, H Kalra, D Puri; *Indian J.Chem.*, 18A, 270 (1979)
1979NSb P Nair, K Srinivasulu; *J.Inorg.Nucl.Chem.*, 41, 251 (1979)
1979PLb A Passoja, L Lajunen; *Finn.Chem.Lett.* 42 (1979)
1979PPa J Powell, M Potter et al; *J.Inorg.Nucl.Chem.*, 41, 1771 (1979)
1979SKd R Sandhu, R Kumar, R Kalia; *Thermochim.Acta*, 30, 355 (1979)
1979VMa G Viswanath, K Menon et al; *J.Inorg.Nucl.Chem.*, 41, 717 (1979)
1978AAa L Asso, M Asso, J Mossoyan, D Benlian; *J.Chim.Phys.*, 75, 561 (1978)
1978AGb R Agarwal; *J.Indian Chem.Soc.*, 55, 220 (1978)
1978AGc R Agarwal; *J.Indian Chem.Soc.*, 55, 984 (1978)
1978AKb S Arora, H Kalra, S Dubey, D Puri; *J.Indian Chem.Soc.*, 55, 445 (1978)
1978BRb H Brittain; *Anal.Chim.Acta*, 96, 165 (1978)

1978COa G Choppin, E Orebaugh; *Inorg.Chem.*, 17, 2300 (1978)
1978GHb Y Gfeller, A Merbach; *Inorg.Chim.Acta*, 29, 217 (1978)
1978GKb C Gupta, P Kanungo, R Mehta; *Indian J.Chem.*, 16A, 1101 (1978)
1978KPe V Krasnov, I Podgornaya et al; *Zh.Obshch.Khim.*, 48, 2593 (1978)
1978MCd M Mayadeo, A Chaubal, S Vartak; *J.Indian Chem.Soc.*, 55, 450 (1978)
1978MMh T Mhaske, K Munshi; *Indian J.Chem.*, 16A, 546 (1978)
1978MMj T Mhaske, K Munshi; *J.Indian Chem.Soc.*, 55, 611 (1978)
1978MMk T Mhaske, K Munshi; *J.Indian Chem.Soc.*, 55, 885 (1978)
1978MNB Y Masuda, T Nakamori, E Sekido; *Nippon Kagaku Kaishi*, 2, 204 (1978)
1978MPb J Miller, J Powell; *Inorg.Chem.*, 17, 774 (1978)
1978MSe S Makhijani, S Sangal; *Ann.Chim.(Rome)*, 68, 461 (1978)
1978MSj M Mali, D Sehgal, R Mehta; *J.Indian Chem.Soc.*, 55, 510 (1978)
1978MSk S Makhijani, S Sangal; *J.Indian Chem.Soc.*, 55, 987 (1978)
1978MSl S Makhijani, S Sangal; *J.Indian Chem.Soc.*, 55, 840 (1978)
1978NBa A Nabil, A Borisova et al; *Zh.Neorg.Khim.*, 23, 364(203) (1978)
1978NLa V Novak, J Lukansky et al; *Chem.Zvesti*, 32, 32 (1978)
1978NLb V Novak, J Lucansky, M Svicekova, J Majer; *Chem.Zvesti*, 32, 19 (1978)
1978PMA L Pethe, B Mali; *J.Indian Chem.Soc.*, 55, 846 (1978)
1978PPb R Petrola, K Poppius et al; *Anal.Chim.Acta*, 99, 393 (1978)
1978SAb A Al-Shawali, A El-Hilaly; *Inorg.Chim.Acta*, 26, 167 (1978)
1978SGf J Sharma, B Garg, R Singh; *Monatsh.Chem.*, 109, 847 (1978)
1978SSb J Srivastava, M Srivastava; *J.Inorg.Nucl.Chem.* 40, 2076 (1978)
1978SSi J Sharma, I Singh, B Garg, R Singh; *J.Indian Chem.Soc.*, 55, 542 (1978)
1977ABf L Alekseeva, N Burde et al; *Zh.Obshch.Khim.*, 47, 695 (1977)
1977AKa Y Agrawal, H Kapoor; *J.Inorg.Nucl.Chem.*, 39, 479 (1977)
1977CGc G Choppin, M Goedeken, T Gritmon; *J.Inorg.Nucl.Chem.*, 39, 2025 (1977)
1977CMA P Carpenter, C Monk, R Whewell; *J.Chem.Soc., Faraday Trans.I*, 73, 553 (1977)
1977DPa D Dalmais, M Petit-Ramel; *Bull.Soc.Chim.Fr.*, 54 (1977)
1977Dwa K Dubey, B Wazir; *Indian J.Chem.*, 15A, 58 (1977)
1977EBa G Efremova, R Buchkova et al; *Zh.Neorg.Khim.*, 22, 954(527) (1977)
1977ERc G Elgavish, J Reuben; *J.Am.Chem.Soc.*, 99, 1762 (1977)
1977GGb T Gritmon, M Goedken, G Choppin; *J.Inorg.Nucl.Chem.*, 39, 2021 (1977)
1977GMA J Gatez, E Merciny, G Duyckaerts; *Anal.Chim.Acta*, 94, 91 (1977)
1977HAa M Hafez, A Atwa; *Ann.Chim.*, 2, 61 (1977)
1977Hcb Y Hasegawa, G Choppin; *Inorg.Chem.*, 16, 2931 (1977)
1977ILb R Izatt, J Lamb et al; *J.Am.Chem.Soc.*, 99, 8344 (1977)
1977Kcc L Kullberg, G Choppin; *Inorg.Chem.*, 16, 2926 (1977)
1977MBb G Manku, A Bhat; *Indian J.Chem.*, 15A, 138 (1977)
1977MNa A Menkov, N Nepomnyaschaya; *Zh.Neorg.Khim.*, 22, 2135(1155) (1977)
1977MSf S Makhijani, S Sangal; *J.Indian Chem.Soc.*, 54, 670 (1977)
1977REa J Reubsen; *J.Am.Chem.Soc.*, 99, 1765 (1977)
1977RTa H Rana, J Tandon; *J.Inorg.Nucl.Chem.*, 39, 1391 (1977)
1977SKd N Skorik; *Zh.Neorg.Khim.*, 22, 1425(776) (1977)
1977SKf S Sandhu, J Kumaria, R Sandhu; *Monatsh.Chem.*, 108, 1105 (1977)
1977SSc O Sakovich, N Skorik; *Zh.Neorg.Khim.*, 22, 98(51) (1977)
1976ABa Y Agrawal, C Bhandari et al; *Monatsh.Chem.*, 107, 75 (1976)
1976BFc I M Batyaev, R C Fogileva; *Zh.Neorg.Khim.* 21, 1199 (1976)
1976BKa E Brucher, R Kiraly, I Toth; *Inorg.Nucl.Chem.Lett.*, 12, 167 (1976)
1976Gkd I P Gorelov, A I Kapustnikov; *Zh.Neorg.Khim.* 21, 2554 (1976)
1976LAB L Lajunen; *Finn.Chem.Lett.* 31 (1976)

1976LAc Lajunen, L H J; Finn.Chem.Lett.36 (1976)
1976LAd L Lajunen; Finn.Chem.Lett.53 (1976)
1976MMb T Mhaske, K Munshi; Indian J.Chem.,14A,421 (1976)
1976NDa R Nayan, A Dey; J.Coord.Chem.,6,13 (1976)
1976NKa V Novak, M Kotoucek, J Lukansky, J Majer; Chem.Zvesti,21,687 (1976)
1976NNa J Narkhede, G Natarajan; Indian J.Chem.,14A,131 (1976)
1976OCa E Orebaugh, G Choppin; J.Coord.Chem.,5,1976 (1976)
1976OCb E Orebaugh, G Choppin; J.Coord.Chem.,5,123 (1976)
1976PEa R Petrola; Finn.Chem.Lett.157 (1976)
1976PKb J Powell, S Kulprathipanjii; Inorg.Chem.,15,493 (1976)
1976RTb H Rana, J Tandon; Indian J.Chem.,14A,430 (1976)
1976SAd R Sandhu; Thermochim.Acta,16,398 (1976)
1976SPa Y Suzuki, J Powell; Bull.Chem.Soc.Jpn.,49,2327 (1976)
1976TRa S Tobia, E Rizkalla; J.Chem.Soc.,Dalton Trans.,569 (1976)
1976WPb K Warriar, C Pavithran, P Mahan, P Joseph; Indian J.Chem.,14A,540 (1976)
1976YCa S Yun, G Choppin, D Blakeway; J.Inorg.Nucl.Chem.,38,587 (1976)
1975BKa E Brucher, E Kiraly, I Nagypal; J.Inorg.Nucl.Chem.,37,1009 (1975)
1975DJa Y Deshpande, D Jahagirdar, V Rao; J.Inorg.Nucl.Chem.,37,1761 (1975)
1975DPa E Dvorakova, Z Pikulikova, J Majer; Chem.Zvesti,29,44 (1975)
1975DPb K Dubey, M Puri; Rev.Chim.Minerale,12,255 (1975)
1975DSa N Dutt, U M Sarma; J.Inorg.Nucl.Chem.,37,606 (1975)
1975EAb M El-Ezaby, I Abdel-Aziz; J.Inorg.Nucl.Chem.,37,2013 (1975)
1975PFb J Powell, J Farrell et al; Inorg.Chem.,14,786 (1975)
1975PLa S Pyrkes, A Lapitskaya, T Zakharova; Zh.Neorg.Khim.,20,2929(1621) (1975)
1975POa J Podlahova; Collec.Czech.Chem.Comm.,40,3306 (1975)
1975RTa H Rana, J Tandon; Monatsh.Chem.,106,559 (1975)
1975RTb H Rana, J Tandon; Monatsh.Chem.,106,1381 (1975)
1975SBa R Saxena, S Bhatia; J.Inorg.Nucl.Chem.,37,309 (1975)
1975TDa M Tokmadjan, N Dobrynina et al; Izv.Akad.Nauk(USSR),2,460 (1975)
1974BFa I Batyaev, R Fogileva; Zh.Neorg.Khim.,19,670(363) (1974)
1974BKb E Brucher, CE Kukri, L Zekany; J.Inorg.Nucl.Chem.,36,2620 (1974)
1974BKe E Brucher, R Kiraly, I Nagypal; Magyar Kem.Foly.,80,135 (1974)
1974CMD F Chatellain, A Merbach; Chimia,22,609 (1974)
1974GGa I Grenthe, G Gardhammar; Acta Chem.Scand.,A28,125 (1974)
1974JOb D Johnson; J.Chem.Soc.,Dalton Trans.,1671 (1974)
1974KBb A Krutous, I Batyaev; Zh.Neorg.Khim.,19,1234(E:671) (1974)
1974KPd N Kurkina, N Petrova, N Skorik; Zh.Neorg.Khim.,19,661(358) (1974)
1974KRa M Taqui-Khan, P Reddy; J.Inorg.Nucl.Chem.,36,607 (1974)
1974KSa F Kai, Y Sadakane; J.Inorg.Nucl.Chem.,36,1404 (1974)
1974LOa A Lokio; Finn.Chem.Lett.,5 (1974)
1974NBd V Netsvetava, I Batyaev; Zh.Neorg.Khim.,19,1256(E:684) (1974)
1974NLa V Novak, J Lukansky, M Svicekova, J Majer; Chem.Zvesti,28,324 (1974)
1974PJa N Polyektov, I Zhel'tvai, M Tischenko; Zh.Neorg.Khim.,19,3257(1783) (1974)
1974POa H Powell; J.Chem.Soc.,Dalton Trans.,1108 (1974)
1974RMg E Riacanska, J Majer, A Bumbalova; Chem.Zvesti,28,768 (1974)
1974SAa H Saarinen; Acta Chem.Scand.,A28,589 (1974)
1974TDa M Tokmadjan, N Dobrynina et al; Zh.Neorg.Khim.,19,2885(1578) (1974)
1974VKa N Vdovenko, V Krumina et al; Zh.Fiz.Khim.,48,1909 (1974)
1973BPd I Batyaev, N Puzankova; Zh.Neorg.Khim.,18,4,981 (1973)
1973CDc G Choppin, A Dadgar, R Stampfli; J.Inorg.Nucl.Chem.,35,875;1703 (1973)

1973DGa I Dellien, I Grenthe, G Hessler; Acta Chem.Scand., 27, 2431 (1973)
1973DMA I Dellien, L Malmsten; Acta Chem.Scand., 27, 2877 (1973)
1973DPA E Didenko, S Pirkes; Zh.Neorg.Khim., 18, 73 (1973)
1973FDa Y Fridman, N Dolgashova, D Sarbaev et al; Zh.Neorg.Khim., 18, 176 (1973)
1973FPb M Farrow, N Purdie; J.Solution Chem., 2, 503; 513 (1973)
1973GBd I Gorelov, V Babich; Zh.Neorg.Khim., 18, 840 (1973)
1973HHc S Hubert, M Hussonois, R Guillaumont; J.Inorg.Nucl.Chem., 35, 2923 (1973)
1973KBd A Krutous, I Batyaev; Zh.Neorg.Khim., 18, 2731(E:1451) (1973)
1973KPe N Kozachenko, N Panteleeva et al; Zh.Neorg.Khim., 18, 1776(E:938) (1973)
1973KSd F Kai, Y Sadakane, H Yokoi, H Aburada; J.Inorg.Nucl.Chem., 35, 2128 (1973)
1973KTA A Kirillov, L Turkina, N Vlasov; Isvest.VUZ.Khim., 16, 6, 846 (1973)
1973LEa I Lebedev; Zh.Neorg.Khim., 18, 2936(E:1562) (1973)
1973LPb A Lapitskaya, S Pirkes; Zh.Neorg.Khim., 18, 1204 (1973)
1973MAa G Manku; Bull.Chem.Soc.Jpn., 46, 1704 (1973)
1973NMa P Nedden, E Merciny, G Duyckaerts; Anal.Chim.Acta, 64, 197 (1973)
1973PAC N Poluektov, L Alakaeva, M Tischenko; Zh.Neorg.Khim., 18, 1, 81 (1973)
1973PMb R Petrola, O Makitie; Suomen Kem., B46, 10 (1973)
1973TRb M Taqui-Khan, P Reddy; J.Inorg.Nucl.Chem., 35, 2813; 2821 (1973)
1973TSb R Tewari, M Srivastava; J.Inorg.Nucl.Chem., 35, 2441; 3044 (1973)
1973TSc R Tewari, M Srivastava; J.Inorg.Nucl.Chem., 35, 3044 (1973)
1973TZA M Tischenko, I Zheltvai, N Poluektov; Zh.Neorg.Khim., 18, 2390 (1973)
1972BKd T Beloedova, L Kazakova, N Skorik; Zh.Neorg.Khim., 17, 6, 1580 (1972)
1972CBB A Cassol, P di Bernardo, R Portanova et al; Gazz.Chim.Ital., 102, 1118
(1972)
1972DCb A Dadgar, G Choppin; J.Inorg.Nucl.Chem., 34, 1297 (1972)
1972DCC G Degischer, G Choppin; J.Inorg.Nucl.Chem., 34, 3823 (1972)
1972DSd N Dutt, S Sanyal, U Sharma; J.Inorg.Nucl.Chem., 34, 2261 (1972)
1972DSe N Dutt, S Sanyal; J.Inorg.Nucl.Chem., 34, 651 (1972)
1972FGa Y Fridman, S Gorokhov, T Fokina et al; Zh.Neorg.Khim., 17, 1268 (1972)
1972FIA A Fidler; Collec.Czech.Chem.Comm., 37, 758 (1972)
1972GBd I Gorelov, V Babich; Zh.Neorg.Khim., 17, 641 (1972)
1972GGa I Grenthe, G Gardhammar; Acta Chem.Scand., 26, 3207 (1972)
1972GOa I Grenthe, H Ots; Acta Chem.Scand., 26, 1217; 1229 (1972)
1972GSe N Guseva, E Sklenskaya et al; Radiokhim., 14, 1, 132 (1972)
1972JAA A Jain, V Agarwala, P Chand, S Garg; Talanta, 19, 1481 (1972)
1972MCD G Manku, R Chadha; J.Inorg.Nucl.Chem., 34, 357 (1972)
1972PSd S Pirkes, M Shestakova et al; Zh.Neorg.Khim., 17, 2, 395 (1972)
1972SCd R Stampfli, G Choppin; J.Inorg.Nucl.Chem., 34, 205 (1972)
1972SOa L Soni; J.Indian Chem.Soc., 49, 341 (1972)
1972SSI P Spitsyn, V Shvarev, T Popyvanov; Zh.Neorg.Khim., 17, 4, 966 (1972)
1972SSj G Shabanova, N Skorik; Zh.Obshch.Khim., 42, 204 (1972)
1972STc O Sunar, S Tak, C Trivedi; Indian J.Chem., 10, 1108 (1972)
1972TRc M Taqui-Khan, P Reddy; J.Inorg.Nucl.Chem., 34, 967 (1972)
1971AWa G Anderegg, F Wenk; Helv.Chim.Acta, 54, 216 (1971)
1971BGB V Babich, I Gorelov; Zh.Anal.Khim., 26, 9, 1832; 1842; 1943 (1971)
1971DGA I Dellien, I Grenthe; Acta Chem.Scand., 25, 1387 (1971)
1971DRa N Dutt, S Rahut, S Sur; J.Inorg.Nucl.Chem., 33, 121 (1971)
1971DRb N Dutt, S Rahut; J.Inorg.Nucl.Chem., 33, 1725 (1971)
1971EKA V Egorova, V Kumok; Zh.Obshch.Khim., 4, 8, 1786 (1971)
1971GDB R Guillaumont, B Desire, M Galin; Radiochem.Radioanal.Lett., 8, 189 (1971)

1971GKb G Geier,U Karlen; *Helv.Chim.Acta*,54,135 (1971)
1971ISa H Irving,K Sharpe; *J.Inorg.Nucl.Chem.*,33,203;217;233 (1971)
1971JWa A Jones,D Williams; *J.Chem.Soc.(A)*,3159 (1971)
1971KBF N Kozachenko,I Batyaev; *Zh.Neorg.Khim.*,16,125(E:66) (1971)
1971KBg N Kozachenko,I Batyaev; *Zh.Neorg.Khim.*,16,1841(E:978) (1971)
1971KOa H Koshimura,T Okubo; *Anal.Chim.Acta*,55,163 (1971)
1971MAa G Manku; *Australian J.Chem.*,24,925 (1971)
1971MAb G Manku; *J.Inorg.Nucl.Chem.*,33,285 (1971)
1971MAc G Manku; *J.Inorg.Nucl.Chem.*,33,3173 (1971)
1971MAf G Manku; *Z.Anorg.Allg.Chem.*,382,202 (1971)
1971MCb P Migal,N Chebotar,A Sorochinskaya; *Zh.Neorg.Khim.*,16,1,102 (1971)
1971MCC P Migal,N Chebotar,A Sorochinskaya; *Zh.Neorg.Khim.*,16,7,1823 (1971)
1971MGb A Mikhailichenko,N Guseva et al; *Zh.Neorg.Khim.*,16,11,3101 (1971)
1971MNa E Merciny,P Nedden,G Duyckaerts; *Anal.Lett.*,4,29 (1971)
1971MSi P Migal,A Sorochinskaya; *Zh.Neorg.Khim.*,16,3243 (1971)
1971PRa E Piskunov,A Rykov; *Radiokhim.*,13,1,84 (1971)
1971SSd P Spitsyn,V Shvarev,G Zvonareva; *Isvest.VUZ.Khim.*,14,1,28 (1971)
1971SSi P Spitsyn,V Shvarev,M Korepina; *Zh.Anal.Khim.*,26,11,2121 (1971)
1970ASa A Anagnostopoulos,P Sakellaridis; *J.Inorg.Nucl.Chem.*,32,1740 (1970)
1970BBh N Belkova,I Batyaev,V Mironov; *Zh.Neorg.Khim.*,15,8,2138 (1970)
1970BKd L Buchenko,P Kovalenko et al; *Zh.Neorg.Khim.*,15,358(E:187) (1970)
1970DRa N Dutt,S Rahut; *J.Inorg.Nucl.Chem.*,32,1033 (1970)
1970DSc N Dutt,U Sharma; *J.Inorg.Nucl.Chem.*,32,1035 (1970)
1970GDa D Goel,Y Dutt,R Singh; *J.Inorg.Nucl.Chem.*,32,2119 (1970)
1970GMB R Gupta,G Manku,A Bhat,B Jain; *Australian J.Chem.*,23,1387 (1970)
1970JWa A Jones,D Williams; *J.Chem.Soc.(A)*,3138 (1970)
1970KAF V Krumina,K Astakhov,S Barkov; *Zh.Fiz.Khim.*,44,422;1609 (1970)
1970KBe N Kozachenko,I Batyaev,V Mironov; *Zh.Neorg.Khim.*,15,888(E:452) (1970)
1970KRa N Kostromina,E Romanenko; *Zh.Neorg.Khim.*,15,7,1782 (1970)
1970KSf A Klygin,I Smirnova,N Kolyada et al; *Zh.Neorg.Khim.*,15,622(E:321) (1970)
1970Mca P Migal,N Chebotar; *Zh.Neorg.Khim.*,15,5,1218 (1970)
1970MSb O Makitie,H Saarinen,L Lindroos et al; *Acta Chem.Scand.*,24,740 (1970)
1970PKe D Pakhomova,V Kumok,V Serebrennikov; *Zh.Neorg.Khim.*,15,5,1211 (1970)
1970PLE N Poluektov,R Lauer,S Ognichenko; *Zh.Neorg.Khim.*,15,2133(E:1099) (1970)
1970POa K Petrov,N Orlin et al; *Zh.Neorg.Khim.*,15,439,442(E:227,229) (1970)
1970RDa R Roulet,T Duc; *Helv.Chim.Acta*,53,1873 (1970)
1970RFa R Roulet,J Feuz,T Duc; *Helv.Chim.Acta*,53,1876 (1970)
1970Sba T Sweet,D Brengartner; *Anal.Chim.Acta*,52,173 (1970)
1970SEa T Seshadri; *Talanta*,17,168 (1970)
1970SSi L Shtenke,N Skorik,V Kumok; *Zh.Neorg.Khim.*,15,5,1214 (1970)
1970VMa G Varlamova,N Mitrofanova et al; *Zh.Neorg.Khim.*,15,5,1239 (1970)
1969AIb B Afghani,J Israeli; *Talanta*,16,1601 (1969)
1969CMB D Campbell,T Moeller; *J.Inorg.Nucl.Chem.*,31,1077 (1969)
1969DNb N Dutt,K Nag,T Seshadri; *J.Inorg.Nucl.Chem.*,31,1435 (1969)
1969DNc N Dutt,K Nag; *J.Inorg.Nucl.Chem.*,31,1867 (1969)
1969DRa N Dutt,S Rahut; *J.Inorg.Nucl.Chem.*,31,3177 (1969)
1969DSb N Dutt,T Seshadri; *J.Inorg.Nucl.Chem.*,31,2153;3336 (1969)
1969FPa D Fay,N Purdie; *J.Phys.Chem.*,73,3462 (1969)
1969IEa R Izatt,D Eatough,J Christensen et al; *J.Chem.Soc.(A)*,45;47 (1969)
1969Jcc A Jones,G Choppin; *J.Inorg.Nucl.Chem.*,31,3523 (1969)

- 1969JPa E Jercan,G Popa; An.Univ.Bucuresti,Chim.,18,43 (1969)
- 1969NDb V Novak,E Dvorakova,M Svicekova et al; Chem.Zvesti,23,330 (1969)
- 1969NDc V Novak,E Dvorakova,M Svicekova et al; Chem.Zvesti,23,861 (1969)
- 1969PCa J Powell,A Chughtai,J Ingemanson; Inorg.Chem.,8,2216 (1969)
- 1969PJa G Popa,E Jercan; An.Univ.Bucuresti,Chim.,18,71 (1969)
- 1969PKe D Pakhomova,V Kumok,V Serebrennikov; Zh.Neorg.Khim.,14,5,1434 (1969)
- 1968CLd A Carson,P Laye,P Smith; J.Chem.Soc.(A),141,1384 (1968)
- 1968CMA G Choppin,L Martinez-Perez; Inorg.Chem.,7,2657 (1968)
- 1968DKc N Davidenko,G Komashko,K Yatsimirskii; Zh.Neorg.Khim.,13,117 (1968)
- 1968DRb R Dreyer,J Redlich,R Syhre; Z.Phys.Chem.,238,417 (1968)
- 1968DZb N Davidenko,A Zholdakov; Zh.Neorg.Khim.,13,11,2955 (1968)
- 1968GCa M Gouveia,R Carvalho; J.Inorg.Nucl.Chem.,30,2219 (1968)
- 1968KKc C Ke,P Kong,M Cheng,N Li; J.Inorg.Nucl.Chem.,30,961 (1968)
- 1968KTb C Kanekar,N Thakar,S Jogdeo; Bull.Chem.Soc.Jpn.,968,41,759 (1968)
- 1968MDc K Munshi,A Dey; Rev.Chim.Minerale,5,619 (1968)
- 1968MIc S Misumi; Nippon Kagaku Kaishi,89,723 (1968)
- 1968NLa V Novak,J Lucansky,J Majer; Chem.Zvesti,22,721 (1968)
- 1968NLb V Novak,L Lucansky,J Majer; Chem.Zvesti,22,733 (1968)
- 1968PFa J Powell,L Farrell,W Neillie,R Russell; J.Inorg.Nucl.Chem.,30,2223 (1968)
- 1968PIa J Powell,J Ingemanson; Inorg.Chem.,7,2459 (1968)
- 1968RAa S Rahman,N Ahmad,J Ahmad; J.Indian Chem.Soc.,45,531 (1968)
- 1968TKe L Thompson,S Kundra; Inorg.Chem.,7,338 (1968)
- 1968TRc V Temkina,M Risina,L Krinitskaya et al; Zh.Obshch.Khim.,38,10,2207 (1968)
- 1968WZa K Winkler,K Zaborenko; Z.Phys.Chem.,238,348 (1968)
- 1967CCd R Carvalho,G Choppin; J.Inorg.Nucl.Chem.,29,725;737 (1967)
- 1967DZb N Davidenko,A Zholdakov; Zh.Neorg.Khim.,12,1195 (1967)
- 1967EMb A Elkhilyali,L Martynenko,V Spitsyn; Proc.Acad.Sci.(USSR),176,886 (855) (1967)
- 1967GDb B Gupta,Y Dutt,R Singh; Indian J.Chem.,5,214;322 (1967)
- 1967GDc B Gupta,Y Dutt,R Singh; J.Inorg.Nucl.Chem.,29,1806 (1967)
- 1967GWA I Grenthe,D Williams; Acta Chem.Scand.,21,341,347 (1967)
- 1967OTa W Ooghe,H Thun,F Verbeek; Anal.Chim.Acta,39,397 (1967)
- 1967PBb B Pokric,M Branica; Croat.Chem.Acta,39,11 (1967)
- 1967PNb J Powell,W Neillie; J.Inorg.Nucl.Chem.,29,2371 (1967)
- 1967SAa S Sangal; J.Prakt.Chem.,36,126 (1967)
- 1967SNb L Sommer,H Novotna; Talanta,14,457 (1967)
- 1967STd H Schurmans,H Thun,F Verbeek; J.Inorg.Nucl.Chem.,29,1759 (1967)
- 1967WCa J Walker,G Choppin; Adv.Chem.Series,71,127 (1967)
- 1967ZDa A Zholdakov,N Davidenko; Zh.Neorg.Khim.,12,1622 (3066) (1967)
- 1966DDa N Davidenko,V Deribon; Zh.Neorg.Khim.,11,53 (99) (1966)
- 1966DMA E Dvorakova,J Majer; Chem.Zvesti,20,233 (1966)
- 1966ERa V Ermolenko; Dokl.Akad.Nauk Ukr.,85 (1966)
- 1966FKa U Frolova,V Kumok,V Serebrennikov; Izv.VUZ.Khim.,9,176 (1966)
- 1966FPb F Firsching,T Paul; J.Inorg.Nucl.Chem.,28,2414 (1966)
- 1966GDa B Gupta,Y Dutt,R Singh; J.Indian Chem.Soc.,43,610 (1966)
- 1966GGb M Gouveia,R Carvalho; J.Inorg.Nucl.Chem.,28,1683 (1966)
- 1966JMc V Jokl,J Majer,H Scharff,H Kroll; Mikrochim.Acta,63 (1966)
- 1966KPb M Krishnamurthy,N Prasad; Indian J.Chem.,4,316 (1966)

1966KRb N Kostromina, E Romanenko; Zh. Neorg. Khim., 11, 598 (1116) (1966)
 1966NSb V Novak, M Svicekova, J Majer; Chem. Zvesti, 20, 252 (1966)
 1966OPa Z Orhanovic, B Pokric, H Furedi, M Branica; Croat. Chem. Acta, 38, 269 (1966)
 1966PRb J Powell, D Rowlands; Inorg. Chem., 5, 819 (1966)
 1966TVa H Thun, E Verbeek, W Vanderleen; J. Inorg. Nucl. Chem., 28, 1949 (1966)
 1966VLa V Vasileva, O Lavrova et al; Zh. Obshch. Khim., 36, 4, 674 (1966)
 1966YDa K Yatsimirskii, N Davidenko, L Lugine; Proc. Acad. Sci. (USSR), 170, 954 (864)
 (1966)
 1965ANb G Anderegg; Helv. Chim. Acta 48, 825 (1965)
 1965CGa G Choppin, A Graffeo; Inorg. Chem., 4, 1254 (1965)
 1965DKb N Dyatlova, M Kabachnik, T Medved; Proc. Acad. Sci. (USSR), 161, 307 (607)
 (1965)
 1965DTa N Dyatlova, V Temkina, Y Belugin; Zh. Neorg. Khim., 10, 612 (1131) (1965)
 1965GEa G Geier; Ber. Buns. Phys. Chem., 69, 617 (1965)
 1965GSb T Goto, M Smutz; J. Inorg. Nucl. Chem., 27, 663 (1965)
 1965SKc N Skorik, V Kumok, E Peror, K Augustan; Zh. Neorg. Khim., 10, 351 (653) (1965)
 1965TVa H Thun, F Verbeek, W Vanderleen; J. Inorg. Nucl. Chem., 27, 1813 (1965)
 1965YCa H Yoneda, G Choppin, J Bear, A Graffeo; Inorg. Chem., 4, 244 (1965)
 1964BMb J Barnes, C Monk; Trans. Faraday Soc., 60, 578 (1964)
 1964DAb N Davidenko; Zh. Neorg. Khim., 9, 859 (1584) (1964)
 1964DBb N Dutt, P Bandyopadhyay; J. Inorg. Nucl. Chem., 26, 729 (1964)
 1964DVa H Deelstra, F Verbeek; Anal. Chim. Acta, 31, 251 (1964)
 1964FDa Y Fridman, N Dolgashova; Zh. Neorg. Khim., 9, 623 (1964)
 1964GRa I Grenthe; Acta Chem. Scand., 18, 283 (1964)
 1964ICb H Irving, J Conesa; J. Inorg. Nucl. Chem., 26, 1945 (1964)
 1964MTa L Moyne, G Thomas; Anal. Chim. Acta, 31, 583 (1964)
 1964PKa J Powell, R Kolat, G Paul; Inorg. Chem., 3, 518 (1964)
 1964PKb J Powell, R Karraker, R Kolat, J Farrell; Rare Earth Research II, New York, p. 512-4 (1964)
 1964PSd J Powell, Y Suzuki; Inorg. Chem., 3, 690 (1964)
 1964SPa R Stagg, J Powell; Inorg. Chem., 3, 242 (1964)
 1964THa L Thompson; Inorg. Chem., 3, 1015 (1964)
 1964THb L Thompson; Inorg. Chem., 3, 1319 (1964)
 1964YCa H Yoneda, G Choppin, J Bear, J Quagliano; Inorg. Chem., 3, 1642 (1964)
 1964ZTa O Zuyagintsen, V Tikhonov; Zh. Neorg. Khim., 9, 865((1597) (1964)
 1963AKa N Akselrud; Redkoz. elementy. Izd. Nauk Moskva, 75; 175 (1963)
 1963AKb N Akselrud; Uzbeksk. Khim. Zh., 32, 800 (1963)
 1963GRd I Grenthe; Acta Chem. Scand., 17, 2487 (1963)
 1963GTa I Grenthe, I Tobiasson; Acta Chem. Scand., 17, 2101 (1963)
 1963KOc N Kostromina; Zh. Neorg. Khim., 8, 988 (1900) (1963)
 1963KUa S Kundra; Indian J. Chem., 1, 362 (1963)
 1963THb L Thompson; J. Inorg. Nucl. Chem., 25, 819 (1963)
 1963TLa L Thompson, J Loraas; Inorg. Chem., 2, 594 (1963)
 1963TLb L Thompson, J Loraas; Inorg. Chem., 2, 89 (1963)
 1962CTa M Cefola, A Tompa, A Celiano, P Gentile; Inorg. Chem., 1, 290 (1962)
 1962HKa R Hering, W Kruger, G Kuhn; Z. Chem., 2, 374 (1962)
 1962KPa R Kolat, J Powell; Inorg. Chem., 1, 293 (1962)
 1962MFb T Moeller, R Ferrus; Inorg. Chem., 1, 55 (1962)
 1962MHa T Moeller, T Hseu; J. Inorg. Nucl. Chem., 24, 1635 (1962)
 1962MMC J Mackey, M Miller, J Powell; J. Phys. Chem., 66, 311 (1962)

1962MTc T Moeller, L Thomson; J. Inorg. Nucl. Chem., 24, 499 (1962)
 1962PMa J Powell, J Mackey; Inorg. Chem., 1, 418 (1962)
 1962RKa A Roppongi, T Kato; Bull. Chem. Soc. Jpn., 35, 1086; 1092 (1962)
 1962THa L Thompson; Inorg. Chem., 1, 490 (1962)
 1962THb L Thompson; J. Inorg. Nucl. Chem., 24, 1083 (1962)
 1961AVa K Astakhov, V Verenikin, V Zinin, Zverkova; Zh. Neorg. Khim., 6, 1057 (2069)
 (1961)
 1961BLb I Batgaeu, S Larionov, V Shulman; Zh. Neorg. Khim., 6, 75 (1961)
 1961GRa I Grenthe; J. Am. Chem. Soc., 83, 360 (1961)
 1961MFb T Moeller, R Ferrus; J. Inorg. Nucl. Chem., 20, 261 (1961)
 1961SKb Z Sheka, E Kriss; Zh. Neorg. Khim., 6, 984 (1930) (1961)
 1960GFa I Grenthe, W Fernelius; J. Am. Chem. Soc., 82, 6258 (1960)
 1960WKa P Wenger, I Kapetanidis; Rec. Trav. Chim., 79, 569 (1960)
 1959BDb R Betts, O Dahlinger; Can. J. Chem., 37, 91 (1959)
 1959HCa R Harder, S Chaberek; J. Inorg. Nucl. Chem., 11, 197 (1959)
 1959SOB A Sonesson; Acta Chem. Scand., 13, 998, 1437 (1959)
 1958DBa N Dutt, P Bandyopadhyay; Sci. Cult., 23, 365 (1958)
 1958FOb B Freasier, A Oberg, W Wendlandt; J. Phys. Chem., 62, 700 (1958)
 1958SOa A Sonesson; Acta Chem. Scand., 12, 1937 (1958)
 1957CFa C Callahan, W Fernelius, B Block; Anal. Chim. Acta, 16, 101 (1957)
 1957DBb N Dutt, P Bandyopadhyay; Science and Culture, 23, 105 (1957)
 1957NOa W Noddak, G Oertel; Z. Elektrochem., 61, 1216 (1957)
 1956SGa G Schwarzenbach, R Gut; Helv. Chim. Acta, 34, 1589 (1956)
 1956SPa F Spedding, J Powell, E Wheelwright; J. Am. Chem. Soc., 78, 34 (1956)
 1956TGa R Tobias, A Garrett; J. Am. Chem. Soc., 80, 3532 (1956)
 1955IFa R Izatt, W Fernelius, C Haas, B Block; J. Phys. Chem., 59, 170 (1955)
 1955WSa E Wheelwright, F Spedding; US AEC - ISC, 637 (1955)
 1954KOb I Korenman; Zh. Obshch. Khim., 24, 1910 (1954)
 1954KSa T Keenan, J Suttle; J. Am. Chem. Soc., 76, 2184 (1954)
 1954RAa F Rakowsky; Thesis, Ohio St. Univ. Microf. 59-5443 (1954)
 1954SGa G Schwarzenbach, R Gut, G Anderegg; Helv. Chim. Acta, 37, 937 (1954)
 1954SJa F Spedding, S Jaffe; J. Am. Chem. Soc., 76, 882 (1954)
 1953WSa E Wheelwright, F Spedding, G Schwarzenbach; J. Am. Chem. Soc., 75, 4196 (1953)
 1952LAB W Latimer; "Oxidation Potentials", Prentice Hall, NY (1952)
 1952VIa R Vickery; J. Chem. Soc., 1895 (1952)
 1951MFb T Moeller, N Fogel; J. Am. Chem. Soc., 73, 4481 (1951)
 1950DUa N Dutt; J. Indian Chem. Soc., 27, 191 (1950)
 1949MMA L Maley, D Mellor; Australian J. Sci. Res., A, 2; 92; 579 (1949)
 1947TMA E Tompkins, S Major; J. Am. Chem. Soc., 69, 2859 (1947)
 1944MKA T Moeller, H Kremers; J. Phys. Chem., 48, 395 (1944)
 1932ENa G Endres; Z. anorg. Chem., 205, 321 (1932)
 1930CCA A Chibnall, R Cannan; Biochem. J., 24, 945 (1930)

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