

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
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 B2=5.38 1991ITa (5493) 15
K3=1.42
K4=0.49

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

Pr+++ cal non-aq 25°C 100% U K1=2.23 B2=3.71 1980VCa (5495) 17

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 1963AKa (5502) 24
Ks(Pr(OH)2.5Cl0.5)=-19.26

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
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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
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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
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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
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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
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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

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                                *K1=-8.55
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Pr+++      oth oth/un 20°C  dil  U                                1966OPa (11958)  58
                                Kso=-22.3
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Pr+++      sol none   25°C  0.0  M                                1963AKb (11959)  59
                                Kso=-22.08
-----
Pr+++      EMF NaCl04 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-
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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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
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Pr+++      sol none   25°C  0.0  M                                1997LBd (13304)  66
                                Kso(PrP04)=-26.43
Calculated from data for 0.10 M HCl04 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.

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 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
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Pr+++	gl	KNO3	25°C	0.10M	U	T H	B2=8.3 K(Pr+2HL)=6.3	1974KRa (13896)	70
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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		K(Pr+HL)=6.98	1963KUa (13897)	71
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Pr+++	gl	NaClO4	?	0.10M	U		B2=16.95 K(Pr+HL)=4.86 K(Pr+2HL)=8.64	1962RKa (13898)	72
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 ReO4- HL Perrhenate (2581)
 Rhenate(VII), Perrhenate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Pr+++	sp	oth/un	rt	1.00M	U		K1=-0.92	1970POa (14109)	73
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Medium: HReO4

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

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Pr+++	dis	oth/un	25°C	1.0M	C		K1=0.34	1997HTb (15230)	75
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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
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Pr+++	sp	NaClO4	?	3.0M	U		K1=0.3	1974NBd (15232)	77
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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 K1in=0.88	1973FPb (16475)	80
Method: ultrasonic absorption. In D2O: K1=3.67, K1is=0.70										
Pr+++	oth	none	25°C	0.0	U			K1=3.67 K1is=0.70	1973FPb (16476)	81
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
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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	1996PJ a (20609)	109
Pr+++	EMF	NaClO4	25°C	1.00M	U	M	K1=2.39 B2=4.46 B(P rLA)=4.74	1991WPb (20610)	110
H2A=maleic acid									
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.71 K(P r(EDTA)+L)=3.58	1986LSb (20611)	111
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.75 K(P r(edta)+L)=3.64	1985LSf (20612)	112
Pr+++	gl	KNO3	32°C	0.10M	U		K(P r+HL=P rL+H)=-1.17 *K(P rL)=-6.36 K(P r+2HL=P rL2+2H)=-2.14 *K(P rL2)=-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	1977C Ma (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(P r+HL=P rL+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(P r+HL)=-75.1, DS(P r+HL)=-328.9.									
Pr+++	gl	NaClO4	25°C	0.20M	U		K1=4.40 B2= 8.14	1996PJ a (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		K(PrL+A)=3.41	1974PJb (21966)	131

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

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-----
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(PO3H2)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

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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 1986LSb (24535) 140
K(Pr(EDTA)+L)=3.43

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.30 1985LSf (24536) 141
K(Pr(edta)+L)=3.48

Pr+++ gl NaClO4 25°C 0.20M U M K1=4.26 1984LSd (24537) 142
K(Pr(edta)+L)=3.43

Pr+++ gl NaClO4 25°C 0.10M U K1=4.30 1972DCc (24538) 143

Pr+++ oth KCl 27°C 0.10M U T K1=4.2 1972SOa (24539) 144
35 C: 4.60; 40 C: 4.82

Pr+++ gl NaClO4 25°C 1.00M U K1=3.27 B2=5.61 1971DGa (24540) 145
B(PrHL)=6.47
B(PrHL₂)=9.26

Pr+++ ix NaClO4 25°C 0.15M U K(Pr+HL)=1.48
K(PrHL+HL)=1.04

Pr+++ gl KNO₃ 25°C 0.10M U K1=3.91 B2=6.30 1968PFa (24542) 147

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

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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
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-----
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
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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
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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
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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
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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  1996PJb (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          K1=1.89  1968CMa (25166) 157
K(Pr+HL)=1.89
*****
C3H6O2S                H2L                      CAS 107-96-0 (437)
3-Mercaptopropanoic acid; HS.CH2.CH2.COOH
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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)
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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

C3H6O3	HL	L-Lactic acid	CAS	79-33-4	(82)
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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

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.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	NaCl04	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	NaCl04	25°C	0.20M	U		K1=4.57 B2= 8.57	1996PJ a (26243)	172
Pr+++	gl	NaCl04	25°C	0.20M	U		K1=4.57 B2= 8.57	1995PJ b (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	NaCl04	25°C	0.20M	U		K1=4.57 B2= 8.57	1987PPa (26249)	178
Pr+++	gl	NaCl04	25°C	0.20M	U	M	K1=6.36	1986LSb (26250)	179
							K(Pr(EDTA)+L)=4.99		
Pr+++	gl	NaCl04	25°C	0.20M	U	M	K1=6.36	1985LSe (26251)	180
							K(Pr(edta)+L)=4.99.		
Pr+++	gl	NaCl04	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.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	NaCl04	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 K(Pr(egta)+L)=3.54	1995KDd (27171)	195
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)	
Nitrilotris(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; H00C.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	NaCl04	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	NaCl04	25°C	0.20M	U	M	K1=4.11	1986LSb (30027)	221
							K(Pr(EDTA)+L)=3.76		
Pr+++	gl	NaCl04	25°C	0.20M	U	M	K1=4.15	1985LSf (30028)	222
							K(Pr(edta)+L)=3.81		
Pr+++	gl	NaCl04	25°C	0.20M	U	M	K1=4.11	1984LSd (30029)	223
							K(Pr(edta)+L)=3.76		
Pr+++	ix	NaCl04	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; H00C.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									
2,2'-Thiodiglycolic acid, Thiodiethanoic acid; H00C.CH2.S.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	NaCl04	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; H00C.CH(SH).CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	NaCl04	25°C	0.20M	U		K1=6.07 B2=11.97	1996PJ a (30354)	227
Pr+++	gl	NaCl04	25°C	0.20M	U		K1=5.89 B2=10.56	1995PJ b (30355)	228
Pr+++	gl	NaCl04	25°C	0.20M	U	M	K1=4.45	1986LSb (30356)	229
							K(Pr(EDTA)+L)=4.34		

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	

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Pr+++	gl	KCl	25°C 0.10M U	K1=4.46 K(Pr+HL)=2.30	2003SbA (30701) 233
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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 KN03 20°C 0.10M U M 1980SDa (30706) 238
B(PrHL)=6.44

Pr+++ g1 KNO3 20°C 0.10M U K1=4.41 B2=6.20 1980Sdb (30707) 239
K(Pr+HL)=1.80

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Pr+++      gl  NaCl04 25°C 0.10M U      K1=4.65    B2=7.74    1970RFa (30708) 240
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Pr+++ EMF NaCl04 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+++ g1 KCl 30°C 0.10M U K1=5.04 B2=8.44 1962CTa (30711) 243
K3=2.80

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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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 1972GOa (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 B(PrHL)=12.62		1987WLa (31927)	258
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.90 K(Pr(EDTA)+L)=4.91		1986LSb (31928)	259
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 K3=2.72	B2=9.07	1962CTa (31931)	262
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 K(Pr(HEDTA)+L)=4.44 K(Pr(CDTA)+L)=4.33 K(Pr(DTPA)+L)=3.80	B2=11.46	1988VSc (32340)	265
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.55 K(Pr(nta)+L)=5.54 K(Pr(edta)+L)=4.28	B2=11.46	1987VSb (32341)	266
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

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

[illegible]

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

Pr+++ g1 NaCl04 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

Extrapolated from data for I=0.07-0.32 M KNO₃. DH(K1)=-72.7 kJ mol⁻¹, DS(K1)=-154.6 J K⁻¹ mol⁻¹; DH(Pr+HL)=-21.7, DS(Pr+HL)=-159.0.

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

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		

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Pr+++      kin oth/un 25°C      U      K1=1.41      1971Mgb (35266) 297
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C4H13N3 L Dien CAS 111-40-0 (584)
1,4,7-Triazaheptane, 2,2'-Iminobis(ethylamine), diethylenetriamine;
NH2.(CH2)2.NH.(CH2)2.NH2

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: DH(K1)=-59.7, DH(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, DH(K1)=-40.4
kJ mol⁻¹, DS=-83; DH(B2)=-83.9, DS-181.

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

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;				

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Pr+++      cal NaCl04 25°C 0.10M U   H   K1=3.21   B2=4.45   1978C0a (35947) 301
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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	K(Pr(EDTA)+L)=3.50	1973TZa (38060)	318	
Pr+++	gl	R4N.X	25°C	0.10M	U	M	K(Pr(EDTA)+L)=2.56	1972FGa (38061)	319	
Pr+++	gl	alc/w	?	50%	U	I	K1=6.47	1971K0a (38062)	320	
Medium: 5-80% MeOH, 0.005 PrCl3, 0.005 HL. 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	B2=8.84	1964YCa (38064)	322
Pr+++	gl	oth/un	30°C	0.10M	U		K1=5.27 K3=3.2	B2=9.17	1960GFa (38065)	323
Pr+++	gl	mixed	?	75%	U		K1=6.91 K3=4.51	B2=12.04	1957DBb (38066)	324
Medium: acetone										
Pr+++	gl	oth/un	30°C	0.0	U		K1=5.4 K3=3.0	B2=9.5	1955IFa (38067)	325
Pr+++	gl	diox/w	25°C	50%	U		K1=8.71	B2=16.84	1949MMa (38068)	326

C5H8O4 H2L CAS 601-75-2 (479)										
Ethylpropanedioic acid; H00C.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; H00C.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	B2=4.89	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	NaCl04	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	NaCl04	25°C	0.20M	U	M	K1=4.02 K(Pr(EDTA)+L)=3.22	1986LSb (38347)	330
Pr+++	gl	NaCl04	25°C	0.20M	U	M	K1=4.06 K(Pr(edta)+L)=3.27	1985LSf (38348)	331
Pr+++	gl	NaCl04	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	NaCl04	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	NaCl04	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	NaCl04	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
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Pr+++	gl	KCl	25°C	0.10M	U		K1=6.47 B2=11.53 B3=14.99 B(Pr+20H+L)=17.05	1980MGc (39278)	341
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 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
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Pr+++	vlt	KCl	25°C	1.0M	C T		K1=3.45	1990NKd (39834)	342
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Method: polarography. At 35 C, K1=2.60

Pr+++	gl	NaClO ₄	30°C	0.2M	U		K1=4.28	1977MSf (39835)	343
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Pr+++	gl	NaClO ₄	25°C	0.10M	U		B2=7.51	1973TSb (39836)	344
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 C5H10N2O5 H2L (8080)
 3-Hydroxy-2,4-diaminopentane-1,5-dioic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Pr+++	gl	KCl	20°C	0.1M	U		K1=5.85	1977ABf (40120)	345
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 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
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Pr+++	gl	KNO ₃	25°C	0.10M	U		K1=2.54 B2=4.31 K3=1.11	1969PCa (40261)	346
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 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
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Pr+++	gl	NaClO ₄	25°C	1.0M	U		K1=2.24	1968GCa (40285)	347
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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 K3=1.36	1970RDa (40302)	348

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 K3=1.32	1975PFb (40317)	349

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 K(Pr(phen)+L)=5.95	1990LSb (40746)	352
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.28 K(Pr(EDTA)+L)=5.45	1986LSb (40747)	353
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
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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

Pr+++ gl NaNO₃ 25°C 0.10M M I M K₁=4.88 1995KDd (41120) 358
K(Pr(egta)+L)=3.61

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

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

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

Pr+++ g1 KN03 25°C 0.10M U K1=3.83 B2=7.13 1968PIa (42588) 364
K3=2.65
K4=2.00

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Pr+++      gl  NaClO4  25°C  2.0M U          K1=3.62  B2=6.25  1965YCa (42589) 365
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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

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 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	1996PJ a (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
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Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.05 K(Pr(EDTA)+L)=2.35	1986LSb (43884)	388
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Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.10 K(Pr(edta)+L)=2.39	1985LSf (43885)	389
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Pr+++	gl	NaClO4	28°C	0.20M	U	M	K1=5.05 K(Pr(edta)+L)=2.35	1982LSa (43886)	390
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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
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Pr+++	gl	NaClO4	25°C	0.20M	U		K1=9.75	1996PJ a (43974)	391
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Pr+++	gl	NaClO4	30°C	0.20M	U	M	K1=9.99 K(Pr(nta)+L)=5.76	1978MSk (43975)	392
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Pr+++	gl	NaClO4	25°C	0.20M	U T H		K1=9.78 K(PrA+L)=4.27	1976MMb (43976)	393
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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
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Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.90	1986LSb (44021)	394
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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; H00C.CH:C(C00H)CH2.C00H

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

Pr+++	gl	NaClO4	25°C	1.00M	C	H	K1=4.81 B2=7.89 B3=8.59 B(PrHL2)=9.54	1974GGa (48349)	451
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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
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Pr+++	gl	NaClO4	25°C	0.10M	U	M	K1=4.49 K(Pr(edta)+L)=4.01	1997PPb (48486)	452
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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
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Pr+++	gl	alc/w	30°C	50%	C		K1=8.67	1994SOa (48782)	453
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Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4.

Pr+++	gl	KNO3	20°C	1.00M	U		K1=8.02 B2=14.65 K(PrL2(OH)+H)=10.52	1974Cmd (48783)	454
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Pr+++	oth	NaNO3	20°C	0.10M	U	M	K1=8.55 B2=15.45	1966JMc (48784)	455
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Method: paper electrophoresis. Ternary complexes with HEDTA

Pr+++	vlt	KCl	25°C	0.10M	U		B2=14.45	1965DTa (48785)	456
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Pr+++	gl	KNO3	25°C	0.10M	U		K1=8.64 B2=15.50	1963TLa (48786)	457
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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
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Pr+++	gl	R4N.X	25°C	0.10M	C		K1=7.84	1988CCb (49265)	458
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Pr+++	gl	KNO3	25°C	0.10M	U		K1=7.84 B2=13.07	1962THb (49266)	459
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C6H12O3 HL DiEtGlycolic CAS 3639-21-2 (421)
2-Ethyl-2-hydroxybutanoic acid; (C2H5)2.C(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	EMF	NaClO4	25°C	1.0M	U			K1=2.31 K3=1.02 K4=0.57	1965TVa (49465)	460

Method: quinhydrone electrode

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	EMF	NaClO4	25°C	1.0M	U			K1=2.25 K3=1.00 K4=0.82	1965TVa (49476)	461

Method: quinhydrone electrode

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KNO3	25°C	0.10M	U			K1=3.23 K3=1.11	1979PPa (49498)	462

C6H12O7 HL Galactonic acid (6942)
2R,3S,4S,5R,6-Pentahydroxy-hexanoic acid, D-Galactonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaClO4	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

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaClO4	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	NaClO4	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 1963KOc (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 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-ureidovaleric acid; H2N.CO.NH.CH2.CH2.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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
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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
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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
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Pr+++ gl KNO3 25°C 0.10M C 1991SKb (52356) 488
 K(PrL+H)=7.17
 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
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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 NaCl04 25°C 0.20M U M K1=4.94 1978MMj (52498) 490
K(Pr(nta)+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 NaCl04 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 NaCl04 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 NaCl04 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 NaCl04 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 K3=4.45	1969CMB (53686)	499

 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 *K(PrL)=-7.94 K(Pr(egta)+L)=5.65	1996KDc (54281)	502
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		

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	KN03	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; H0.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; H0.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					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	1996PJb (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; H₂OC₆H₄.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; H03S.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 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; (H03S)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

C7H7NO5		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

3-Amino-5-sulfosalicylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Pr+++	gl	KCl	25°C	0.20M	M	T H	K1=7.89 K(Pr+OH+L)=14.84	1991BPb (55693)	541
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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
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Pr+++	gl	NaNO3	25°C	0.0	U	M	K1=9.74 K(Pr(egta)+L)=5.68	1996KDb (56076)	542
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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
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Pr+++	sp	KCl	25°C	0.10M	M	I	K1=5.94	1986PLb (56132)	543
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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
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Pr+++	sp	KCl	25°C	0.10M	M	I	K1=5.63	1986PLb (56151)	544
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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
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Pr+++	gl	KNO3	25°C	0.10M	U		K1=5.83 B2=10.61	1963THb (56811)	545
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C7H11NO6 H3L (2926)
2-Aminobutanoic-N-propane-1,3-dioic acid; H00C.CH(C2H5)NH.CH(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Pr+++	gl	KNO3	25°C	0.1M	U		K1=8.35	1982KKc (56850)	546
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C7H11NO6 H3L MNTA (1026)
Nitrilo(2-propanoic)-diethanoic acid; H00C.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

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Pr+++      gl  NaCl   20°C 0.10M U      K1=2.72      1977SSc (57408) 553
-----
Pr+++      EMF NaCl04 25°C 1.0M U      K1=2.50      B2=4.33      19670Ta (57409) 554
                                   K3=1.27
                                   K4=0.67

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Method: quinhydrone electrode

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

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pr+++      gl  NaCl04 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

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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;

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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

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

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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=8.33      B2=15.18     1980RPa (57618) 557

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

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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.

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

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Pr+++      EMF NaCl04 25°C 1.0M U      K1=2.51      B2=4.03      1965TVa (57865) 559

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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 *K(PrL)=-5.44 K(2Pr(OH)L=Pr2(OH)2L2)=8.82	2001AAb (57997)	562

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
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Medium: DMSO

Pr+++	sp	KNO3	12°C	0.10M	U		K(Pr+H2L)=3.78	1965GEa (58530)	566
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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 K3=3.84	B2=11.42 1995MTa (58668)	568
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 K(Pr(egta)+L)=4.06	1995KDb (59004)	571
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 K(Pr(EDTA)+L)=3.63	1986LSb (59005)	572
Medium: 40% v/v EtOH/H2O, 0.2 M NaClO4									
Pr+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.60 K(Pr(edta)+L)=3.67	1985LSf (59006)	573
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 K3=8.26	1989LWa (59128)	577

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

C8H8N4O5 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
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Pr+++	gl	NaClO ₄	25°C	0.1M	C	H	K ₁ =2.04	1996HYa (59560)	583
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By calorimetry: DH(K₁)=10.43 kJ mol⁻¹

Pr+++	gl	NaClO ₄	25°C	0.10M	C	H	K ₁ =2.04	1990HYa (59561)	584
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By calorimetry: DH(K₁)=10.4 J K⁻¹ mol⁻¹

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Pr+++	sp	alc/w	?	3%	U		K ₁ =6.71	1967GDb (59603)	585
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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
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Pr+++	gl	alc/w	25°C	20%	M	I		1994KDa (59682)	586
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K(Pr+HL)=6.03

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
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Pr+++	gl	NaClO ₄	25°C	0.10M	M	H	K ₁ =1.96	1988CLb (59745)	587
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DH=8.74 kJ mol⁻¹, DS=69 J K⁻¹ mol⁻¹

Pr+++	gl	alc/w	25°C	42%	U		K ₁ =2.9	1983PMa (59746)	588
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Pr+++	sp	KCl	25°C	0.10M	U		K ₁ =1.14 B ₂ =1.62	1981MTc (59747)	589
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Pr+++	gl	diox/w	30°C	76%	M		K ₁ =6.88	1978PMa (59748)	590
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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
Pr+++	gl	NaClO4	25°C	2.0M	U	T	K1=2.30	1972DCb (59864)	593
Pr+++	ix	NaClO4	20°C	0.20M	U		K1=2.36 B2=4.17 B3=5.14	1968WZa (59865)	594
Pr+++	gl	KNO3	25°C	1.0M	U	I	K1=2.11 B2=3.71	1967PNb (59866)	595
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

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
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.									

C8H8O4		H3L					CAS 480-66-0	(8525)	

2,4,6-Trihydroxyacetophenone;

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.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	diox/w	35°C	50%	U		K1=4.27 B2=7.68	1971MAa (60095)	602

Medium: 50% dioxan, 0.1 M NaClO4

C8H9NO2 HL CAS 4389-45-1 (3226)
3-Methyl-2-aminobenzoic acid; CH3.C6H3(NH2).COOH

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 K(Pr(egta)+L)=4.52	1995KDc (60235)	603

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=5.18, K(Pr(egta)+L)=4.21.

C8H9NO2 HL CAS 5330-97-2 (6248)
Phenylacetohydroxamic acid; C6H5.CH2.CO.NH.OH

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 K3=4.45 K(Pr(hedta)+L)=4.15	1987RSc (60352)	604

hedta is N-hydroxyethyl diaminoethane-N,N',N'-triethanoic acid.

Pr+++	gl	KNO3	20°C	0.10M	M	T	K1=5.67 B2=11.04 K3=4.52	1986RSc (60353)	605
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Data for 20-50 C. At 30 C, K1=5.59, K2=5.30, K3=4.45.

C8H9NO2S HL CAS 104-18-7 (4575)
(4-Aminophenylthio)ethanoic acid; H2N.C6H4.S.CH2.COOH

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;

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; HOOCC(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; HOOCC.H2.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
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Pr+++	gl	mixed	30°C	75%	U			K1=8.22	1971DRb (62081)	626
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Medium: 75% acetone, 0.1 M

C8H1404 H2L Suberic acid CAS 505-48-6 (517)
Octanedioic acid; H00C.(CH2)6.C00H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pr+++	gl	KN03	25°C	0.20M	U	M			1990KMF (62100)	627
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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).C00H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pr+++	EMF	NaCl04	25°C	1.0M	U			K1=2.53 B2=4.03	1965TVa (62636)	628
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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
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Pr+++	ISE non-aq	25°C	100%	U				K1=5.27 B2=7.09	1982MDa (62720)	629
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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
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Pr+++	gl	NaCl	25°C	0.10M	C			K1=2.33 B(PrHL)=9.18	1999HLb (62859)	630
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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
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Pr+++	gl	KN03	25°C	0.10M	C			K1=3.44	2001AAb (62877)	631
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*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 Et4NClO4

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'-Thiazolylazo)-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						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						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						CAS 84-88-8 (448)	

8-Hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	NaCl04	25°C	0.20M	U	T M	K1=5.87 B2=10.71 K3=3.56 K(Pr(NTA)+L)=4.65 K(Pr(HEDTA)+L)=4.21 K(Pr(EDTA)+L)=4.17	1978MMh (64574)	646

Pr+++	gl	KNO3	30°C	0.10M	U	M	K(Pr(NTA)+L)=4.52	1976RTb (64575)	647
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Pr+++	cal	KNO3	20°C	0.10M	U	HM	K(PrA+L)=4.01	1971GKb (64576)	648
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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 K3=4.3	1958F0b (64577)	649
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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 K(Pr+HL)=4.27 K(PrL+H)=6.06	19850Hb (64721)	650

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	NaCl04	?	0.20M	U		K1=7.45 K(PrHL)=10.07	1967GDc (64951)	651
Pr+++	gl	NaCl04	25°C	0.20M	U		K1=7.74 B2=13.70 K3=3.56	1966GDa (64952)	652

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	NaCl04	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	NaCl04	25°C	0.10M	C	H		K1=2.08 B2=3.60	1990HYa (65372)	656
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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	NaCl04	20°C	0.20M	U			K1=2.45 B2=4.20 B3=5.11	1968WZa (65442)	657
Pr+++	gl	NaCl04	25°C	1.0M	U			K1=2.40 B2=3.96 K3=1.36 K4=0.92	1966TVa (65443)	658

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	NaCl04	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	NaCl04	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.

C9H1004 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.

C9H1004 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.

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

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

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.

C9H1004 H2L CAS 3853-88-1 (5687)
endo-cis-Bicyclo-[2,2,1]-5-hepten-2,3-dicarboxylic acid;

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

Pr+++ gl NaClO₄ 24°C 0.10M U K1=4.38 1986ZBa (65591) 665

K(Pr+HL)=1.80

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

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

Pr+++ gl KCl 30°C 0.10M U K1=5.35 B2= 7.97 1996SZa (65608) 666

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

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

Pr+++ gl KCl 30°C 0.10M C K1=5.35 B2=7.97 1996SZa (65623) 667

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

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-----
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.

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

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-----
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.

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-----
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.

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-----
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

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-----
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      1986KHc (66239) 672
Method: polarography. Medium pH 2.70. Also data for 35 C.

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Pr+++      gl  KNO3   25°C 0.10M U T H      K(Pr+HL)=4.35      1976SAd (66240) 673
                                         K(PrHL+HL)=3.88

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C9H11N3O2S      HL      CAS 51146-75-9 (6170)
N-(2-Hydroxy-3-methoxybenzylidene)thiosemicarbazide; CH3O(OH)C6H3.CH:N.CS.NH.NH2

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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=7.36      1988MKd (66510) 674
*****

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```

C9H11N3O3      HL      CAS 58336-41-7 (6169)
N-(2-Hydroxy-3-methoxybenzylidene)semicarbazide; CH3O(OH)C6H3.CH:N.CO.NH.NH2

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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=9.85      1988MKd (66517) 675
*****

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C9H12N2O6      HL      Uridine      CAS 58-96-8 (828)
Uracil-1-beta-D-ribofuranoside;

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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
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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		1992RAd (66981)	680

K(Pr+HL)=3.65
K(PrHL+Gly)=3.91
K(Pr+HL+His)=8.62
K(Pr+HL+histamine)=7.91

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	1990RSc (67075)	681

K(Pr+HA+L)=7.34
B(PrLB)=14.28
B(PrLC)=19.37

H2A=Iminodiethanoic acid, H3B=NTA, H4C=EDTA

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
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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
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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   NaCl04 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
*****
C10H7N505          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									
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 K3=5.62	1995MTa (69161)	711
Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.									

C10H8N2		L					2,2'-Bipyridyl CAS 366-18-7	(25)	
2,2'-Bipyridine; (C5H4N)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	NaNO3	25°C	0.50M	U		K1=0.9	1979HJa (69636)	712

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

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

C10H9N30S 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 Et4NClO4

C10H9N30S 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

C10H9N302S 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

C10H902Br 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

C10H902F 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	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 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	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	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	1979MBc	(70762) 727

Pr+++	gl	alc/w	24°C	80%	U		K1=7.76 K3 = 4.06	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	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

Pr+++ gl mixed 30°C 67% U K1=6.84 B2=13.09 1964DBb (70766) 731
K3=5.21

Medium: 67% acetone, 0.1 M NaCl04

Pr+++ gl none ? 0.0 U K1=7.02 B2=13.62 1958DBa (70767) 732
K3=5.12

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

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 B2=12.18	1979KSb (70943)	737

K3=5.32

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;

B3=18.0
B(PrL3(OH))=24.0

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

C10H12N4O5	HL	Inosine	CAS 58-63-9	(2344)
Hypoxanthine-9-beta-D-ribofuranoside;				

B(Pr(gly)L)=9.51
B(Pr(his)L)=10.45

C10H12N4O6 H2L Xanthosine CAS 5968-90-1 (1176)
3,9-Dihydro-9-ribofuranosyl-1H-purine-2,6-dione;

$$\begin{aligned}K(\text{Pr}+\text{HA}+\text{HL}) &= 5.10 \\K(\text{Pr}+\text{HB}+\text{HL}) &= 5.65 \\K(\text{Pr}+\text{HL}) &= 4.24\end{aligned}$$

C10H12O2 HL CAS 1946-74-3 (202)
3-Isopropyltropolone;

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

C10H1204 HL CAS 5936-18-9 (2743)
2-Hydroxy-3,4-dimethoxyacetophenone; (H0)(CH3O)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									

C10H1205	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.									

C10H1205	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.									

C10H14N507P	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 *K(PrL)=-5.66 K(2Pr(OH)L=Pr2(OH)2L2)=8.01 B(PrLA)=9.12 B(PrLB)=8.13	2001AAb (72483)	750
B(PrLC)=8.78, B(PrLD)=7.94. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.									

C10H14N508P	H3L	GMP-5					CAS 85-32-5 (2947)		
Guanosine-5'-monophosphoric acid;									

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

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
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Pr+++	gl	KCl	25°C 0.10M U	K ₁ =12.30 K(Pr+HL)=6.35	1980MMe (73173) 752
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Pr+++ gl KCl 25°C 0.10M U K1=11.30 1979MMe (73174) 753

Pr+++ g1 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',N'-tetraethanoic acid, Sequestric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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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+++ g1 NaCl04 25°C 0.20M U K1=12.15 1984LSd (74084) 760

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Pr+++      gl  NaCl04 28°C 0.20M U      K1=9.96      1982LSa (74085) 761
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Pr+++ gl NaCl04 20°C 0.02M U M 1982MPd (74086) 762
K(PrL+P04)=2.65

Pr+++ sp KCl * 0.1M U 1980KKf (74087) 763
K(Pr+HL)=8.05

room temperature

Pr+++ vlt KNO3 20°C 0.10M U K1=16.56 1978NLb (74088) 764

Pr+++ g1 NaCl04 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	1959BD b (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 NaCl04 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 NaCl04 25°C 0.10M U TIH K₁=6.880 2003GSb (75140) 787
Values for 0.05-0.2 M NaCl04, 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'-triethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Pr+++ gl NaCl04 25°C 0.50M U K₁=14.17 1977GGb (75475) 788

 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.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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 1989BP a (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
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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
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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
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Pr+++ gl diox/w 25°C 75% U K1=4.96 1975DJ a (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
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Pr+++ gl diox/w 30°C 75% U T K1=4.25 B2=8.13 1984AP a (77041) 806

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
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Pr+++      gl  diox/w 25°C  75%  U          K1=5.48          1975DJa (77064) 808
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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
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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
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Pr+++ gl diox/w 20°C 50% U T K1=8.19 B2=15.94 1977SKf (77129) 810

B3=23.79

$$K_3 = 7.85$$

Pr+++	gl	diox/w	25°C	75%	U	K1=5.49	1975DJa	(77130)	811
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C11H8O4 HL CAS 7555-37-5 (4812)

3-Acetyl-4-hydroxycoumarin

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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; CO.C9H3O(=O)(CH3)(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pr+++ gl diox/w 30°C 50% U T I M K1=4.74 B2=8.31 1985ECa (77206) 813

$$K_3 = 2.35$$

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			1971MAa (77426)	817

K(Pr+HL)=3.31

K(Pr+2HL)=5.79

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.

Pr+++	sp	KCl	20°C	0.10M	U		K(Pr+HL)=3.35	1971EKa (77575)	819
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Pr+++	sp	NaClO4	20°C	0.10M	U		K1=9.3 K(Pr+HL)=10.5	1967SNb (77576)	820
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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'-Sulfoophenylhydrazo)-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;
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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
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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=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
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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-hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H4.CH3
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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;
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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 B3=16.6	1997RPa (78536)	834

Medium: acetonitrile.

C11H13NO4S HL CAS 58943-48-9 (1411)
N-Acetylacetonylidene-orthanilic acid; HO3S.C6H4.N:C(CH3).CH2.CO.CH3

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

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 K(Pr+HL)=5.63 K(Pr+2HL)=11.76	1989YSa (78636)	836

Pr+++	gl	KNO3	20°C	0.10M	U		K1=12.92 B2=21.71	1983MSc (78637)	837
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C11H13NO6 H4L CAS 59036-09-8 (2111)
2,5-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

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

C11H14N2O4 H2L (1880)
N-(6-Methyl-2-pyridylmethyl)iminodiethanoic acid; CH3C5H3NCH2N(CH2COOH)2

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;

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
Pr+++	EMF	KNO3	25°C	0.10M	U		K1=15.29	1980KBc (79326)	841
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)
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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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; ((HOOCH2)2N.CH2.)2.CH2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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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;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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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
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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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);
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Pr+++      gl  mixed  30°C 75% U           K1=9.43   B2=17.94  1972DSd (79656) 848
K3=7.62

```

Medium: 75% acetone

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*****
C11H18O2         HL                      CAS 5601-52-5 (4821)
2-Butanoyl-6-methylcyclohexanone (2-butyryl-6-methylcyclohexanone);
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Pr+++      gl  mixed  30°C 75% U           K1=10.40  B2=19.70  1972DSd (79667) 849
Medium: 75% acetone

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*****
C11H22O5         L       16-Crown-5          CAS 55477-28-8 (1592)

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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
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Pr+++	cal	non-aq	25°C	100%	U	H		K1=2.76	1993LLa (79869)	850
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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
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Pr+++	gl	NaClO4	25°C	0.10M	C				2001GYb (79958)	851
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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
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Pr+++	gl	alc/w	22°C	80%	U			K1=6.38 B2=11.89 K3=5.49	1995MTa (80189)	852
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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
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Pr+++	dis	non-aq	25°C	100%	C	HM			1998YHa (80509)	853
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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)salicylalimine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pr+++	gl	alc/w	25°C	50%	C	T H		K1=4.26 B2= 7.49	1997GSa (80589)	854
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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
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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 NaCl04 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 NaCl04

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 NaCl04

C12H12N03Cl 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
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Pr+++	vlt	KNO3	20°C	0.10M	U		K1=17.49	1968NLa (82032)	869
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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
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Pr+++	gl	KNO3	20°C	0.10M	U		K1=7.71	1975DPa (82092)	870
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Pr+++	gl	KNO3	25°C	0.10M	U		K1=7.21	1973GBd (82093)	871
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Pr+++	gl	KNO3	30°C	0.10M	U		K1=7.22	1972STc (82094)	872
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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
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Pr+++	vlt	KNO3	20°C	0.10M	U		K1=17.76	1976NKa (82142)	873
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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
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Pr+++	gl	NaClO4	25°C	0.10M	U	IH	K1=11.94	1988RNa (82176)	874
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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
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Pr+++	sp	NaClO4	20°C	0.10M	U		K1=17.39	1971ISa (82327)	875
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Pr+++	vlt	oth/un	20°C	0.10M	U		K1=17.49	1966DMA (82328)	876
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Pr+++	vlt	KNO3	20°C	0.10M	U		K1=17.49	1966NSb (82329)	877
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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 1993INa (83584) 887
B(PrPL)=6.95
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
Pr+++	ISE	non-aq	25°C	100%	C T H		K1=16.1	1986ALa (83884)	893

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; (CH3.0.CH2.CH2.0.CH2.CH2.0.CH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	non-aq	25°C	100%	C		K1=5.19	1989BP a (84017)	895

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)
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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

C13H502F13S	L	(6997)
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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)
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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

C13H9F02S	HL	CAS 43191-66-8	(6154)
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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)
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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)
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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;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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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      Diphenylcarb.  CAS 538-62-5 (1195)
Diphenylcarbazone; C6H5.NH.NH.CO.N:N.C6H5
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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)
Diphenylthiocarbazone; 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)

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3-(2-Acetylphenylhydrazone)pentane-2,4-dione;(CH3.CO)2C:N.NH.C6H4(CO.CH3)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	diox/w	30°C	75%	U			K1=10.50 B2=19.58	1988ESb (85615)	915

C13H15NO6		H3L						(4999)		
2-Benzylnitritotriethanoic acid;										

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										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	KN03	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 .										

C13H19NO3		H2L						(2031)		
2-(1-(2-Hydroxyphenyl)-ethylimine)-3-methylbutanoic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	gl	NaCl04	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;										

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

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; ((HOOCH2)2N.CH2.CH2)2CH2										

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 K(Pr(edta)+L)=8.12 B(Pr(edta)L)=20.37	1984LSe (86753)	929
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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 K3=6.90	B2=17.30 1983AGb (87049)	935

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 K3=6.92	B2=17.36 1983AGb (87075)	936

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 K3=7.22	B2=17.95 1983AGb (87084)	937

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 B3=12.69	B2=9.14 1976WPb (87178)	938

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 K3=6.59	B2=16.71 1983AGb (87245)	940

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 K3=6.20	1977AKa (87253)	941

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 K3=6.39	1977AKa (87265)	942

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 K3=6.62	1977AKa (87278)	943

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 K3=6.62	1977AKa (87291)	944

C14H12O2 HL Diphenylacetic CAS 117-34-0 (1952)

Diphenylethanoic acid; (C6H5)2CH.CO.OH

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 B3 < 5.3	1968WZa (87334)	945

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
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Pr+++	gl	KCl	25°C	1.0M	U		K1=7.48 K(PrHL+H)=5.34 K(PrL+H)=7.76	1987CMe (88840)	973
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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
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Pr+++	gl	KCl	25°C	1.0M	U		K1=7.76 K(PrHL+H)=5.89 K(PrL+H)=7.18	1987CMe (88865)	974
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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
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Pr+++	gl	R4N.X	25°C	0.10M	C		K1=7.74	1988CCb (88885)	976
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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
Pr+++	cal	KNO3	25°C	0.10M	C	T			1988MIa (89358)	977
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
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
room temperature										
Pr+++	cal	NaClO4	25°C	0.50M	U	H			1977CGc (89361)	980
DH(K1)=-35.5 kJ mol ⁻¹										
Pr+++	gl	NaClO4	25°C	0.50M	U			K1=19.62	1977GGb (89362)	981
Pr+++	sp	oth/un	20°C	0.50M	U			K1=20.14	1971PRa (89363)	982
By potentiometry : K1=20.22										
Pr+++	sp	oth/un	18°C	.003M	U			K1=21.79 B(Pr2L)=27.92	1970KAf (89364)	983
Pr+++	cal	KNO3	27°C	0.10M	U	H			1968CLd (89365)	984
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
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

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
Pr+++	vlt	KNO3	20°C	0.10M	U			K1=15.09	1969NDc (89517)	987

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
Pr+++	vlt	KNO3	20°C	0.10M	U			K1=17.36	1974NLa (89537)	988

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

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 K(Pr+HL)=6.99	1984TPa (89735)	994

 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

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 K(PrL+ala)=3.19 K(PrL+phe)=2.85	1991ADb (89923)	1001
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 K(PrL+ida)=1.4	1985KBb (89924)	1002
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-Heptaioxacycloheneicosane;

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-Heptaioxaheneicosane; CH3.0.(CH2.CH2.0)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

C15H11NO4 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.

C15H13N02 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

C15H13N02 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 1990D0b (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

C15H14O3S 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

C15H14O4 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

C15H14O4 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

C15H14O4 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

C15H15NO2 HL (1167)
N-(4-Tolyl)-4'-tolylhydroxamic acid; CH3.C6H4.CO.N(C6H4.CH3)OH

35 C: $K_1=9.25$, $K_2=8.25$, $K_3=7.25$

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 K3=7.91	1983AGb	(91868)1032

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
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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 B3=22.2	1997RPb	(92288)1036

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	1966VL a	(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 K(Pr+HL)=12.78	1989SPa	(92398)1038

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-dioxaheptyl)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
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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 NaCl04 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 NaCl04. 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

C16H14O3 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
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Pr+++	gl	diox/w	30°C	70%	U			1996SNa	(93540)1052
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K(Pr+HL)=9.80

K(PrHL+HL)=7.95

Medium: 70% v/v dioxane/H2O, 1.0 M NaClO4.

C16H14O3 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
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Pr+++	gl	alc/w	35°C	70%	U		K1=7.41 B2=14.34	1982SLb	(93574)1053
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Pr+++	gl	alc/w	35°C	70%	U		K1=7.41 B2=14.34	1980SLb	(93575)1054
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C16H14O4 HL BHMMA (5929)
omega-Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Pr+++	gl	alc/w	30°C	25%	M		K1=6.29 B2=11.41	1987DGb	(93584)1055
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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
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Pr+++	gl	diox/w	25°C	70%	U		K1=7.45 B2=14.67	1996DAb	(93642)1056
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Medium: 70% dioxane/H2O, 0.10 M NaClO4.

C16H18N2O3 HL (5564)
2-(2-Acetylphenylhydrazon)-5,5-dimethyl-1,3-cyclohexanedione;

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=9.35 B2=17.15	1988ESb	(93785)1057
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C16H18N4 L CAS 172665-46-2 (7699)
N,N'-Dimethyl-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=7.05          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

C17H12O4	H2L	CAS 60430-57-8 (6189)
1-(2-Furyl)-3-(2-naphthol)-propan-1,3-dione; C4H3O.CO.CH2.CO.C10H6.OH		

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;

```
Pr+++      gl  diox/w 30°C  75%  M      K1=15.74  B2=29.15  1987ESa (95771)1080
*****
```

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

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;

```
Pr+++      gl  diox/w 30°C  75%  M          K1=8.14  B2=15.37  1987ESa (96012)1082
*****
```

Sulfafurazole thiophene-2-aldehyde Schiff base; $C_4H_3S \cdot CH:N \cdot C_6H_4 \cdot SO_2 \cdot NH \cdot C_4H_0(CH_3)_2$

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;

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

C17H₂₇N₄O₄ 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;

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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=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)
-----

```

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-----
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-Acetylphenylhydrazon)-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
-----

```

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-----
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          K(Pr+HL)=8.97    1968TRc (97409)1094
*****
C18H20N2O6          H4L  EHPG                      CAS 10328-28-6 (429)
N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (HOOCC(C6H4OH)NHCH2.)2
-----

```

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-----
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	KN03	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									

C18H29NO4 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+++	g1	R4N.X	25°C	0.10M	C			K1=8.85	1988CCb	(97915)1099

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)
Triethylenetetraaminehexaethanoic acid;(((H₂COO).CH₂)₂N).CH₂.CH₂.N(CH₂.COOH).CH₂)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pr+++	EMF	KN03	25°C	0.10M	C	T H		K1=22.77 K(PrL+H)=3.65 K(PrHL+H)=2.27	1987H	Ca (98083)1100

Method: Hg electrode; competitive reaction with Hg(II).
Data for 15-35 C. At 25 C, $\Delta H(K1) = -125 \text{ kJ mol}^{-1}$, $\Delta S(K1) = 15.7 \text{ J K}^{-1} \text{ mol}^{-1}$.

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
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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
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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
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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
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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 K(PrA+L)=9.12 K(PrB+L)=8.12	1987S0a (99574)	1113

H2A=hydroxyethyliminodiethanoic acid, H3B=nitritotriethanoic 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 K(PrA+L)=9.32 K(Pr(NTA)+L)=8.66	1994S0a (99661)	1114

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
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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			K(?)=5.2	1968RAa (99699)	1117

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
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Pr+++	sp	none	25°C	0.0	U			1978BRb (99734)	1119
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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
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Pr+++	gl	diox/w	30°C	75%	U			1985RSb (99839)	1120
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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
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Pr+++	gl	KNO3	20°C	0.10M	U		K1=17.85	1985SNb (100014)	1121
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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
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Pr+++	sp	non-aq	25°C	100%	C		K1=1.72	2003ZRa (100212)	1122
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Medium: DMSO. Method: competition with murexide.

Pr+++	cal	non-aq	25°C	100%	C	H	K1=2.54	1998LHa (100213)	1123
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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
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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
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Pr+++	dis	R4N.X	25°C	0.12M	C		K1=1.84	1998SUa (100284)	1125
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Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

C20H35N5O10 H3L (6623)
 1,4,7-Tris(carboxymethyl)-13,16-dioxo-1,4,7,10,19-pentaazacycloheneicosa-9,20-dione
 ;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	sp	KCl	25°C	0.08M	U		K1=16.5	1994FCa (100562)	1126

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	sp	non-aq	25°C	100%	C		K1=1.76	2003ZRa (100697)	1127

Medium: DMSO. Method: competition with murexide.

 C21H17N2O5As H2L ArsenoBDMPH (5931)
 2-Arsonodibenzoylmethanepherylhydrazone; C6H5.CO.C(CO.C6H5):N.NH.C6H4.AsO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	alc/w	27°C	40%	U		K1=13.75 B2=18.10	1990MOc (101082)	1128

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4

 C21H17N5 L (7365)
 2,6-Bis(1-methylbenzimidazol-2-yl)pyridine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	gl	non-aq	25°C	100%	C		K3=6.3	1997PBa (101092)	1129

Medium: CH3CN; 0.1 M Et4NClO4

 C21H30N4O8 H3L Tyr-Val-Asp-Ala (6015)
 Tyrosyl-valyl-aspartyl-alanine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	nmr	KCl	25°C	0.50M	U		K1=3.15 K(Pr+HL)=2.50 ? K(Pr+H2L)=0.75 ?	1987ZAa (101368)	1130

 C22H14O9 H5L CAS 4431-00-9 (3513)
 Aurintricarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pr+++	sp	oth/un	25°C	?	U		K(Pr+HL)=4.2(?)	1967SAa (101505)	1131

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		K1eff=5.18 B2eff=9.70 B(2,2)eff=12.59	2004LLa (101642)	1134

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
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C22H19N3O4S HL CAS 84819-63-6 (8347)
N-(3,4-DiMe-5-isoxazoly)-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 K(PrL+H)=3.37	1990HLA (101902)	1137

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;
(HOOCCCH2)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-Acetylphenylhydrazon)-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 K3=2.8	1997PBa (106552)	1165
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]arenedicarboxylic 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 tetradiisopropylethanoamide;

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

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EXPLANATORY NOTES

DATA Flags are :-

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

M Data for TERNARY Complexes

EVALUATION Flags are :-

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

END