

## SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 835 experiments for

(no ligands specified)

Metal : Dy+++

(no references specified)

(no experimental details specified)

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e- HL Electron (442)  
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	oth	none	25°C	0.0	U			1974JOb (453)	1	
								K(Dy+3e=Dy(s))=-117.1(-2.31V)		
								K(Dy+e=Dy(II))=-44(-2.6V)		

Method: Literature evaluated data

Dy+++	oth	none	25°C	0.0	U			1952LAb (454)	2	
								K(Dy+3e)=-119.3(-2350 mV)		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	sol	none	25°C	0.0	C			1992FIa (1137)	3	
								Kso(DyAsO4)=-23.83		

Equilibrium monitored by EDTA and iodine titrations.

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C03-- H2L Carbonate CAS 465-79-6 (268)  
Carbonate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.70M	C			K1=5.86 2004LBb (3192)	4	
								K(Dy+HCO3=DyHCO3)=1.45		

Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.56, B2=12.91,  
K(Dy+HCO3=DyHCO3)=2.50, K(Dy+HL=DyL+H)=-2.77, K(Dy+2HL=DyL2+2H)=-7.75

Dy+++	dis	NaClO4	25°C	0.70M	C	I		K1=5.83 B2=10.39 1998LBb (3193)	5	
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Method: H2O/tributylphosphate distribution and ICP-mass spectrometry.  
Values calculated for I=0.0 M, K1=7.81, B2=13.47.

Dy+++	sol	none	25°C	0.0	C			1986FMA (3194)	6	
								Kso(Dy2(CO3)3)=-33.97		

Dy+++	sol	none	25°C	0.0	C			1986HMA (3195)	7	
								Kso(Dy2(CO3)3)=-33.97		

Method: spectrophotometry.

Dy+++ dis oth/un 20°C 2.5M C 1979DBb (3196) 8

B4=15.32

Media: 2.5 M (NH<sub>4</sub>)<sub>2</sub>NO<sub>3</sub>/hexane. Analysis by NAA. By competition with edta;  
K1(Dy(edta))=18.31 recalculated for I=2.5 from J.Am.Chem.Soc.,75 1953,4196

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C6N6Fe--- H3L Ferricyanide (2491)

Hexacyanoferrate (III); Fe(III)(CN)<sub>6</sub>---

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

Dy+++ cal none 25°C 0.00 M H K1=3.68 1972SCd (3641) 9

DH(K1)=4.3 kJ mol<sup>-1</sup>, DS=84.9 J K<sup>-1</sup> mol<sup>-1</sup>

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

Chloride;

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

Dy+++ dis NaCl 25°C 1.0M C K1=-0.12 1997HTb (4788) 10

Method: by solvent extraction from 1.0 M NaCl into CHCl<sub>3</sub>, 0.1 M

1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.

Dy+++ cal non-aq 25°C 100% U H K1=2.57 B2=4.76 1991ITa (4789) 11

K3=1.46

K4=1.43

Medium: DMF, 0.2 M Et<sub>4</sub>NC<sub>10</sub>4. DH(K1)=17.8 kJ mol<sup>-1</sup>, DH(K2)=25.8, DH(K3)=20

DH(K4)=24. DS(K1)=109, DS(K2)=129, DS(K3)=95 J K<sup>-1</sup> mol<sup>-1</sup>

Dy+++ sol NaClO<sub>4</sub> 25°C ? U K1=0.31 1982MAa (4790) 12

Dy+++ cal non-aq 25°C 100% U K1=1.82 B2=3.98 1980VCa (4791) 13

Medium: diethylacetamide

Dy+++ sp NaClO<sub>4</sub> 25°C 3.0M U K1=-0.01 1971KBf (4792) 14

Medium: LiClO<sub>4</sub>

Dy+++ sol none 25°C 0.0 U 1960ASd (4793) 15

Kso(Dy(OH)<sub>2</sub>Cl)=-17.8

Kso(Dy(OH)<sub>2</sub>.5Cl<sub>0.5</sub>)=-21.3

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

Fluoride;

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

Dy+++ ix oth/un 25°C 0.02M C T H K1=3.88 B2= 6.29 2004LMA (6824) 16

Medium: 0.025 M HNO<sub>3</sub>. Applying Pitzer parameters: at I=0, K1=10.14.

Data for 5 to 45 C. DH(K1)=9.2 kJ mol<sup>-1</sup>, DH(B2)=22.2.

-----  
Dy+++ ISE NaClO4 25°C 0.0 C I K1=4.39 2000LBa (6825) 17  
Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaClO4.  
At I=0.70 M, K1=3.457.

-----  
Dy+++ ix KNO3 25°C 0.02M C K1=3.85 B2= 6.35 1999SBc (6826) 18  
Medium: 0.025 M HNO3. Additional method: ICP-MS.  
Assumed K1(HF) = 3.03, derived from literature values.

-----  
Dy+++ ISE none 25°C 0.0 C H K1=3.38 B2=6.43 1989MJa (6827) 19  
Kso=-15.1  
Also by conductivity and radiometry. DH(Kso)=56.1 kJ mol<sup>-1</sup>; DS=-98

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Dy+++ ISE R4N.X 25°C 0.50M C K1=3.38 B2=6.43 1989MJb (6828) 20  
-----  
Dy+++ cal NaClO4 25°C 1.00M C H 1988GBa (6829) 21  
DH(K1)=9.27 kJ mol<sup>-1</sup>; DS(K1)= 97.4 J mol<sup>-1</sup> K<sup>-1</sup>

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Dy+++ ISE NaCl 25°C 1.00M C K1=3.322 1985BBb (6830) 22

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Dy+++ gl KCl 25°C 1.00M U M 1981KTb (6831) 23  
K(DyEDTA+F)=1.94  
K(Dy(EDTA)F+F)=0.48

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Dy+++ EMF NaClO4 25°C 0.50M U K1=3.58 1968IZa (6832) 24  
K(Dy+HF=DyF+H)=0.64

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Dy+++ EMF NaClO4 25°C 1.0M U H K1=3.46 1967WCa (6833) 25  
By calorimetry: DH(K1)=29.4 kJ mol<sup>-1</sup>, DS=164.7 J K<sup>-1</sup> mol<sup>-1</sup>

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

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

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Dy+++ sol oth/un 25°C 0.0 U 1966FPb (8509) 26  
Kso=-10.92

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

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

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Dy+++ sol oth/un 25°C dil U 1974LOa (8601) 27  
Kso(Dy(H2IO6)(H2O)3)=-10.13

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Mo04-- H2L Molybdate (443)  
Molybdate;

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

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Dy+++ con oth/un 25°C .001M U K1=4.49 1968DKc (8727) 28  
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Mo12042U----- H8L (2922)  
Uranium-12-molybdate;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Dy+++ gl oth/un 20°C 0.10M U K1=5.46 1989SBb (8771) 29  
B(DyHL)=8.55

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Dy+++ cal NaCl04 25°C 2.0M C IH K1=-0.70 1998BMb (9644) 30  
DH(K1)=6.9 kJ mol<sup>-1</sup>. From Pitzer extrapolation to I=0.0, K1=0.08,  
DH(K1)=5.9 kJ mol<sup>-1</sup>

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Dy+++ dis none 25°C 0.0 U K1=1.32 1992MSb (9645) 31  
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Dy+++ dis R4N.X 25°C 0.0 C K1=1.32 1988MSg (9646) 32  
Extraction into tributylphosphate from 0.1-2.74 M NH4NO3 medium.

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Dy+++ oth oth/un 25°C 0.0 U K1<0.9 1972SSc (9647) 33  
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Method:ultrasonic absorption

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Dy+++ sp KNO3 ? var U K(Dy+3L+HL)=-0.50 1970KSf (9648) 34  
K(DyL3HL+2HL)=-1.59  
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Dy+++ dis none 20°C 0.0 U K1=-0.28 1967KOb (9649) 35

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OH- HL Hydroxide (57)  
Hydroxide;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Dy+++ gl NaCl04 25°C 0.0 C IH \*K1=-7.59 2000KBa (11270) 36  
In 0.7 M NaCl04, \*K1=-7.89. DH(\*K1)=47 kJ mol<sup>-1</sup>.

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Dy+++ gl NaCl 25°C 0.10M U I \*B(1,3)=-21.45 1999FBa (11271) 37  
In 0.1 M Me4NCl, \*B(1,3)=-22.14.

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Dy+++ EMF alc/w 20°C 25% U \*K1(DyA+H2O=DyAOH+H)=-6.85 1973SPe (11272) 38  
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Medium: ca.25 to 35% w/w MeOH or EtOH/H2O. H3A=NTA

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Dy+++	dis	NaClO4	?	0.10M	U		1971GDb (11273)	39
						*K1=-5.6		

Medium: LiClO4

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Dy+++	oth	oth/un	rt	10%	U		1967PBb (11274)	40
						Kso=-27.5		
						K(DyL3(s)=DyL3)=-4.9		

Medium: 10% sea water.

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Dy+++	gl	NaClO4	25°C	0.30M	U		1966FKa (11275)	41
						*K1=-8.10		

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Dy+++	vlt	none	20°C	0.0	M		1966KAa (11276)	42
						Kso=-25.00		

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Dy+++	oth	oth/un	20°C	dil	U		19660Pa (11277)	43
						Kso=-23.6		

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Dy+++	sp	none	20°C	0.0	M		1964KBb (11278)	44
						Kso=-27.90		

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Dy+++	sol	none	25°C	0.0	U		1960ASd (11279)	45
						Kso=-25.9 aged		

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Dy+++	sol	oth/un	100°C	var	U		1932ENa (11280)	46
						Kso=y - 0.30		

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

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	sol	none	25°C	0.0	M			1997LBd (13160)	47
							Kso(DyP04)=-25.18		

Calculated from data for 0.10 M HClO4 solution.

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Dy+++	sol	oth/un	25°C	0.0	C	I		1993FKb (13161)	48
							Kso(DyP04)=-26.31		

In synthetic seawater, Ks(DyP04)=-23.66.

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Dy+++	sol	none	25°C	0.0	C			1991FBa (13162)	49
							Kso(DyP04)=-25.15		

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++ kin none 25°C 0.0 U B2=20.64 1967SSo (13581) 50  
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P2W17061----- Polytungstate (2102)  
 alpha-Heterodiphospho-polytungstate (usually alpha1 isomer)

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

Dy+++ sp NaClO4 25°C 1.0M C K1=7.05 2003VCa (13710) 51  
 Method: laser-induced fluorescence spectroscopy for Eu+++ as competing ion  
 For P2W18062, K1=3.53.

Dy+++ cal NaClO4 25°C 1.0M C H 2002VCa (13711) 52  
 DH(K1)=-3.15 kJ mol-1, DS(K1)=124.4 J K-1 mol-1.

Dy+++ cal NaClO4 25°C 1.0M C H K1=3.11 2002VCa (13712) 53  
 DH(K1)=-0.61 kJ mol-1, DS(K1)=64.5 J K-1 mol-1.  
 By entropy titration: DH(K1)=-1.08 kJ mol-1, DS(K1)=61.03 J K-1 mol-1.  
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P3O10----- 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

Dy+++ gl KNO3 25°C 0.10M U T H B2=9.2 1974KRa (13850) 54  
 K(Dy+2HL)=6.9  
 K(Dy+2HL)=7.2 and B2=9.5 (35 C), K(Dy+2HL)=6.7 and B2=9.0 (45 C)  
 DH(Dy+2HL)=-20 kJ mol-1; DH(B2)=-20

Dy+++ gl NaClO4 ? 0.10M U B2=17.12 1962RKA (13851) 55  
 K(Dy+HL)=4.94  
 K(Dy+2HL)=8.84

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

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

Dy+++ dis oth/un 25°C 1.0M C K1=0.45 1997HTb (14929) 56  
 Method: by solvent extraction from 1.0 M NaSCN into CHCl3, 0.1 M  
 1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.

Dy+++ sp NaClO4 ? 0.60M U K1=0.12 1964KSe (14930) 57  
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 SO4-- H2L Sulfate CAS 7664-93-9 (15)  
 Sulfate;

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

Dy+++ sol oth/un 25°C 0.66M C K1=1.90 2004SBb (16139) 58

Method: solubility of BaSO<sub>4</sub> in 0.117 m DyCl<sub>3</sub> solution.  
 Calculated for I=0, K<sub>1</sub>=3.57.

Dy+++ cal none 25°C 0.0 U H 1974POa (16140) 59  
 DH(K<sub>1</sub>)=20.3 kJ mol<sup>-1</sup>

Dy+++ oth none 25°C 0.0 U K<sub>1</sub>=3.61 1973FPb (16141) 60  
 K<sub>1in</sub>=0.52

Method: ultrasonic absorption

Dy+++ con oth/un 25°C 0.0 U K<sub>1</sub>=3.63 1973FPb (16142) 61  
 Medium:D20

Dy+++ oth none 25°C 0.0 U K<sub>1</sub>=3.63 1973FPb (16143) 62  
 K<sub>1is</sub>=0.46

Method: ultrasonic absorption. Medium:D20

Dy+++ kin none 25°C 0.0 U K<sub>1</sub>=3.61 1973RSb (16144) 63

Dy+++ cal oth/un 25°C 0.0 U H 1969FPa (16145) 64  
 DH(K<sub>1</sub>)=16.0 kJ mol<sup>-1</sup>

Dy+++ cal oth/un 25°C 0.0 U H K<sub>1</sub>=3.43 B<sub>2</sub>=5.18 1969IEa (16146) 65  
 DH(K<sub>1</sub>)=15.4 kJ mol<sup>-1</sup>, DH(K<sub>2</sub>)=5.73; DS(K<sub>1</sub>)=117.5 J K<sup>-1</sup> mol<sup>-1</sup>, DS(K<sub>2</sub>)=52.3

Dy+++ ISE NaClO<sub>4</sub> 25°C 2.0M U H K<sub>1</sub>=1.23 B<sub>2</sub>=1.72 1967CCd (16147) 66  
 By calorimetry: DH(K<sub>1</sub>)=18.4 kJ mol<sup>-1</sup>, DS=85.3 J K<sup>-1</sup> m<sup>-1</sup>; DH(K<sub>2</sub>)=5.4, DS=27.6  
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CH<sub>3</sub>OF<sub>3</sub>S HL CAS 1493-13-6 (6755)  
 Trifluoromethanesulfonic acid; CF<sub>3</sub>SO<sub>3</sub>H

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

Dy+++ sp non-aq 25°C 100% U 1993BCc (17460) 67  
 K<sub>3</sub>=2.53

Medium: MeCN

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C<sub>2</sub>H<sub>2</sub>O<sub>3</sub> HL Glyoxylic acid CAS 298-12-4 (1142)  
 Glyoxylic acid; OHC.COOH

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

Dy+++ gl NaClO<sub>4</sub> 20°C 0.10M U K<sub>1</sub>=2.56 B<sub>2</sub>=4.46 1964PSd (18418) 68  
 K<sub>3</sub>=1.7

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C<sub>2</sub>H<sub>2</sub>O<sub>4</sub> H<sub>2</sub>L Oxalic acid CAS 144-62-7 (24)  
 Ethanedioic acid; (COOH)<sub>2</sub>

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

Dy+++ ix R4N.X 25°C 0.05M C K1=5.82 B2=10.16 2001SBf (18859) 69  
K(Dy+HL)=1.96  
Medium: 0.05 M NH4NO3. At I=0, K1=6.74, B2=11.35.

Dy+++ gl KCl 25°C 1.0M U M 1988KTa (18860) 70  
K(Dy(edta)+L)=3.07

Dy+++ gl KNO3 35°C 0.10M U M K1=6.72 1986RMb (18861) 71  
B(DyL(cytidine))=10.09

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Dy+++ gl NaClO4 25°C 0.10M U T H K1=6.48 B2=11.71 1983SSb (19253) 72  
K3=3.90

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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  
Dy+++ gl alc/w 25°C 95% U H K1=5.03 B2=9.01 1967Gwa (19938) 73  
B3=11.79  
B4=13.18

Medium: 95% MeOH, 0.5 M NaClO4. By calorimetry: DH(K1)=17.1 kJ mol<sup>-1</sup>, DS=153.4  
DH(K2)=11.4, DS=114.5, DH(K3)=4.2, DS=66.9, DH(K4)=1.3, DS=29.3 J K<sup>-1</sup> mol<sup>-1</sup>

Dy+++ cal NaClO4 25°C 2.0M C H 1964GRa (19939) 74  
DH(K1)=12.24 kJ mol<sup>-1</sup>, DS(K1)=73.7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=18.57, DS(B2)=120;  
DH(B3)=18.03, DS(B3)=134.

Dy+++ gl NaClO4 20°C 0.10M U K1=2.03 B2=3.64 1962KPa (19940) 75

Dy+++ EMF NaClO4 20°C 2.0M U K1=1.67 B2=2.97 1958SOa (19941) 76  
B3=3.79  
B4=3.9

Method: quinhydrone electrode

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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  
Dy+++ gl NaClO4 25°C 0.20M U K1=5.61 B2=11.00 1998PJb (20307) 77

Dy+++ gl NaClO4 25°C 0.20M U K1=5.64 B2=11.03 1995PJb (20308) 78

Dy+++ gl NaClO4 20°C 0.10M U 1964PKa (20309) 79



K(Dy+HL)=1.94  
K(DyHL+HL)=1.32

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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
Dy+++	gl	NaClO4	25°C	3.0M	C			B(Dy2H-2L6)=0.01 B(Dy4H-6L8)=-15.1 B(Dy4H-7L8)=-24.2 B(Dy4H-8L8)=-34.0	2002TFa (20518)	80
Dy+++	EMF	NaClO4	25°C	1.00M	U	M		K1=2.48    B2=4.73 B(DyLA)=5.01	1991WPb (20519)	81
H2A=maleic acid										
Dy+++	gl	KNO3	32°C	0.10M	U			K(Dy+HL=DyL+H)=-0.75 *K(DyL)=-5.89 K(Dy+2HL=DyL2+2H)=-2.22 *K(DyL2)=-5.71	1980PPf (20520)	82
Dy+++	cal	NaClO4	25°C	2.0M	C	H		DH(K1)=-0.686 kJ mol <sup>-1</sup> , DS(K1)=46 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=-2.54, DS(B2)=77.0; DH(B3)=-7.268, DS(B3)=88.3; DH(B4)=-10.8, DS(B4)=87.5.	1964GRa (20521)	83
Dy+++	gl	NaClO4	20°C	0.10M	U			K1=2.924    B2=4.97 B3=6.55	1964PKb (20522)	84
Dy+++	EMF	NaClO4	20°C	2.0M	U			K1=2.52    B2=4.48 B3=5.9 B4=6.5 B5=6.3	1959SOb (20523)	85

Method: quinhydrone electrode

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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
Dy+++	gl	KNO3	25°C	0.0	M T H			K1=6.07 K(Dy+HL=DyL+H)=-3.57	2003MBa (21527)	86
Extrapolated from data for I=0.07-0.32 M KNO3. DH(K1)=-98.9 kJ mol <sup>-1</sup> , DS(K1)=-215.8 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(Dy+HL)=-66.8, DS(Dy+HL)=-292.5.										
Dy+++	gl	NaClO4	25°C	0.20M	U			K1=4.48    B2= 7.90	1995PJb (21528)	87
Dy+++	gl	KNO3	25°C	0.20M	U	M		K1=6.19	1990LSb (21529)	88

Dy+++	g1	KN03	35°C	0.10M	U		1987RRC (21530)	89
K(Dy+HL)=3.86								

Dy+++      gl   KN03   35°C 0.10M U      M      1986RMb (21531)   90  
K(Dy+HL)=3.86  
K(Dy+HL+cytidine)=8.59

Dy+++	EMF	KCl	25°C	1.0M	U	M	1977G	Ma	(21532)	91
							K(DyA+L)			
							K(DyA+HL)			
							K(DyA+H2L)			

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	sp	non-aq	25°C	100%	U			K8=0.9 K9=0.4	1992MBb (22095)	92

\*\*\*\*\*

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
Dy+++	g1	NaClO4	22°C	0.10M	U			K(DyH-1L+H)=7.15	1972Mcd (22143)	93

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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
Dy+++	ISE	non-aq	25°C	100%	C	H		K1=2.28 B2=4.12 B3=5.49	1992CBa	(23147)

Medium: DMSO, 0.10 M Et<sub>4</sub>NClO<sub>4</sub>. By calorimetry, DH(K1)=-18.1, DH(B2)=-38.6, DH(B3)=-77.8 kJ mol<sup>-1</sup>.

Dy+++      g1   KN03    25°C 0.10M U TIH      K1=5.63   B2=10.78   1986NSa (23148)   95  
B(DyAL)=9.33

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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
Dy+++	gl	NaClO4	25°C	0.10M	C	H	K1=1.92 B2=3.65 B3=5.2	1996HBa (23984)	96
DH(K1)=14.1 kJ mol <sup>-1</sup> , DS=84 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
C3H4O3		HL		Pyruvic acid			CAS 127-17-3	(1152)	
2-Oxopropanoic acid; CH <sub>3</sub> .CO.COOH									
Dy+++	nmr	NaClO4	25°C	2.00M	U	H	K1=1.27	1980CCa (24046)	97
DH=-4.51 kJ mol <sup>-1</sup> . Alternative method: Calorimetry.									
*****									
C3H4O4		H2L		Malonic acid			CAS 141-82-2	(79)	
Propanedioic acid; CH <sub>2</sub> (COOH) <sub>2</sub>									
Dy+++	ix	NaClO4	25°C	0.15M	U			1968KKc (24425)	98
K(Dy+HL)=2.0									
K(DyHL+HL)=1.1									
Dy+++	gl	KN03	25°C	0.10M	U		K1=4.47 B2=7.17	1968PFa (24426)	99
*****									
C3H4O6		H2L					CAS 560-27-0	(4233)	
Dihydroxypropanedioic acid; HOOC.C(OH) <sub>2</sub> .COOH									
Dy+++	gl	KCl	25°C	0.20M	U		K1=3.82	1973LPb (24623)	100
*****									
C3H5N02		HL					(4234)		
Isonitrosoacetone; CH <sub>3</sub> .CO.CH:N.OH, anti-Pyruvic aldehyde oxime									
Dy+++	gl	diox/w	20°C	50%	U		K1=5.88	1971MAf (24640)	101
Medium: 50% dioxan, 0.1 M NaClO4									
*****									
C3H6N2O2		L		Methylglyoxime			CAS 2140-03-6	(2981)	
Methylglyoxime; CH <sub>3</sub> .C(:N.OH).CH:N.OH									
Dy+++	gl	diox/w	20°C	50%	U		K1=6.94 B2=12.93	1971MAf (24802)	102
Medium: 50% dioxan, 0.1 M NaClO4									
*****									
C3H6O2		HL		Propionic acid			CAS 79-09-4	(35)	

Propanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	NaCl04	25°C	2.0M	U			K1=1.63 B2=2.97	1965CGa (24996)	103
Dy+++	gl	NaCl04	20°C	0.10M	U			K1=1.93 B2=3.45	1964PKa (24997)	104

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C<sub>3</sub>H<sub>6</sub>O<sub>2</sub>S H<sub>2</sub>L Thiolactic acid CAS 79-42-5 (366)  
2-Mercaptopropanoic acid; CH<sub>3</sub>.CH(SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	NaCl04	25°C	0.20M	U			K1=5.62 B2=12.04	1998PJb (25133)	105
Dy+++	gl	NaCl04	25°C	0.20M	U			K1=5.62 B2=11.04	1995PJb (25134)	106
Dy+++	gl	NaCl04	25°C	2.00M	U				1968CMA (25135)	107

K(Dy+HL)=1.58  
\*\*\*\*\*  
C<sub>3</sub>H<sub>6</sub>O<sub>2</sub>S H<sub>2</sub>L CAS 107-96-0 (437)  
3-Mercaptopropanoic acid; HS.CH<sub>2</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	NaCl04	25°C	2.00M	U				1968CMA (25203)	108

K(Dy+HL)=1.60  
\*\*\*\*\*  
C<sub>3</sub>H<sub>6</sub>O<sub>3</sub> HL CAS 81598-26-7 (2521)  
3-Hydroxypropanoic acid; HO.CH<sub>2</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	NaCl04	25°C	2.00M	U			K1=1.45	1969JCc (25262)	109

\*\*\*\*\*  
C<sub>3</sub>H<sub>6</sub>O<sub>3</sub> HL L-Lactic acid CAS 79-33-4 (82)  
L-2-Hydroxypropanoic acid; CH<sub>3</sub>.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	KN03	30°C	0.10M	U				1983MPc (25427)	110

K(Dy+HL=DyL+H)=0.36  
\*K(DyL)=-4.70  
K(Dy+2HL=DyL2+2H)=-0.69  
\*K(DyL2)=-4.11

Dy+++	gl	NaCl04	25°C	0.10M	U			K1=3.09 B2=5.38 B3=5.95	1966GGb (25428)	111
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Dy+++	gl	NaCl04	25°C	0.20M	U			K1=2.59 B2=4.82	1964DVa (25429)	112
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$$K_4 = 0.63$$

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K(DyH-1L+H)=6.90

Dy+++ gl NaCl 25°C 0.10M U 1970PKe (27728) 122

K(DyH-1L+H)=6.95

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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

Dy+++ gl KNO3 27°C 0.10M M M 1979KSc (28302) 123

K(DyL+phthalate)=6.54

K(DyL+malonate)=5.73

\*\*\*\*\*

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

Dy+++ gl KNO3 25°C 0.10M U K1=12.70 B2=22.64 2002KAa (28556) 124

K(Tb+HL)=6.21

K(Tb+2HL)=10.18

Dy+++ gl KNO3 25°C 0.10M C 1991SKb (28557) 125

K(DyL+H)=7.31

K(DyHL+H)=5.56

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C4H204 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

Dy+++ cal NaClO4 25°C 0.10M U H K1=2.87 B2=4.25 19760Ca (28642) 126

DH(K1)=9.1 kJ mol<sup>-1</sup>, DS=85 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=17.1, DS=139

Dy+++ gl NaClO4 25°C 0.10M C H K1=2.866 B2= 4.25 19760Cb (28643) 127

By calorimetry: DH(K1)=9.12 kJ mol<sup>-1</sup>, DS(K1)=85.3 J K<sup>-1</sup> mol<sup>-1</sup>;

DH(B2)=17.1, DS(B2)=138.

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C4H4N2O2S 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

Dy+++ gl oth/un 25°C 0.10M U K1=2.860 1987TSb (28885) 128

\*\*\*\*\*

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

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Dy+++      gl  oth/un 25°C 0.10M U T H    K1=4.31      1987TSb (28909) 129
30 C:K=3.80; 35 C: 3.44. DH=-151 kJ mol-1, DS=-426 J K-1 mol-1
*****
C4H4O4      H2L    Maleic acid      CAS 110-16-7 (111)
cis-Butenedioic acid; HOOC.CH:CH.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      EMF NaCl04 25°C 1.00M U    M    K1=2.91   B2=4.36   1991WPb (29065) 130
                                         B(DyLA)=5.01
HA=glycolic acid
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Dy+++      gl  KNO3   25°C 0.10M U T HM   K1=5.78   B2=9.21   1986NSa (29066) 131
                                         B(DyAL)=9.34
H2A=phthalic acid. DH(DyAL)=-59.6 kJ mol-1, DS=-21.0 J K-1 mol-1
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Dy+++      gl  NaCl04 25°C 0.10M U          K1=3.74      1973CDc (29067) 132
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Dy+++      gl  NaCl04 25°C 0.10M U          K1=3.75   B2=5.84   1970RFa (29068) 133
*****
C4H4O4      H2L    Fumaric acid      CAS 110-17-8 (289)
trans-Butenedioic acid; HOOC.CH:CH.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  NaCl04 25°C 0.10M C          K1=2.50      1986LCa (29191) 134
                                         B(DyHL)=6.02
                                         K(Dy+HL)=1.94
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Dy+++      gl  KNO3   25°C 0.10M U T HM   K1=3.18      1986NSa (29192) 135
                                         B(DyAL)=6.41
H2A=phthalic acid. DH(DyAL)=-48.6 kJ mol-1, DS=-40.4 J K-1 mol-1
-----

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-----
Dy+++      gl  NaCl04 25°C 0.10M U          K1=2.80      1973CDc (29193) 136
*****
C4H4O5      H2L    Oxobutanedioic CAS 328-42-7 (1733)
2-Oxosuccinic acid, Oxalacetic acid; HOOC.CH2.CO.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  oth/un 25°C    ? U          K1=5.7   B2=10.2   1956GNc (29264) 137
*****
C4H6O4      H2L    Succinic acid      CAS 110-15-6 (112)
1,4-Butanedioic acid; HOOC.CH2.CH2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  NaCl04 25°C 0.10M M    H    K1=3.33      1986CDb (29961) 138
DH=16.6 kJ mol-1, DS=120 J K-1 mol-1
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$$B(DyLB) = 9.74$$

C<sub>4</sub>H<sub>7</sub>N<sub>0</sub>O<sub>4</sub>                  H<sub>2</sub>L        IDA                      CAS 142-73-4    (118)  
Iminodiethanoic acid; HN(CH<sub>2</sub>.COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	KCl	25°C	1.0M	U	M		1988KTa (32218) 160 K(Dy(edta)+L)=4.10		
Dy+++	gl	NaClO4	25°C	0.20M	U	M		K1=7.16 B2=12.90 1988VSc (32219) 161 K(Dy(HEDTA)+L)=6.15 K(Dy(CDTA)+L)=5.11 K(Dy(DTPA)+L)=4.63		
Dy+++	gl	NaClO4	25°C	0.20M	U	M		K1=7.16 B2=12.90 1987VSb (32220) 162 K(Dy(nta)+L)=6.24 K(Dy(edta)+L)=4.85		
Dy+++	gl	KN03	27°C	0.10M	M	M		1984KTb (32221) 163 K(DyA+L)=5.61 K(DyB+L)=5.48		
H2A=Citraconic acid, H2B=Maleic acid										
Dy+++	gl	KN03	27°C	0.10M	U	M		1980KTb (32222) 164 K(DyA+L)=6.07 K(DyB+L)=5.83		
H2A=phthalic acid, H2B=malonic acid										
Dy+++	EMF	KCl	25°C	1.0M	U	M		1977GMa (32223) 165 K(DyA+L)=5.41 K(DyA+H2L)=0.90 K(DyA+H3L)=2.38		
Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.										
Dy+++	cal	KN03	20°C	0.10M	U	HM		1971GKb (32224) 166 K(DyA+L)=3.84		
DH(DyA+L)=-31.21 kJ mol-1, DS=-33 J K-1 mol-1. DH(DyAL)=-36.28, DS=300.0. H4A=EDTA										
Dy+++	gl	KN03	25°C	0.10M	U	M		K1=6.88 B2=12.31 1962THa (32225) 167 Ternary complexes with N-(2-hydroxyethyl)diaminoethane-triethanoic acid ***** C4H8N2O2 H2L Dimethylglyoxim CAS 95-45-4 (2032) 2,3-Butanedione dioxime, Dimethylglyoxime; CH3.(C:NOH).(C:NOH).CH3		
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	diox/w	20°C	50%	U			K1=8.24 B2=15.52 1971MAf (32536) 168 Medium: 50% v/v dioxan, 0.1 M NaClO4 ***** C4H8N2O3 HL Asparagine CAS 70-47-3 (17) 2-Aminobutanedioic acid 4-amide; H2N.CH(CH2.CO.NH2).COOH		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	30°C	0.10M	U		K1=3.95 B2=6.90	1984YLa (32692)	169
*****									
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
Dy+++	gl	KCl	60°C	0.10M	U		K1=6.55 B2=11.16 B3=13.80	1978NBa (33082)	170
*****									
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
Dy+++	gl	KNO3	30°C	0.10M	U	M	K(Dy(EDTA)+L)=2.542	1984AIa (33103)	171
*****									
C4H8O2		HL					CAS 79-31-2	(573)	
2-Methylpropanoic acid; CH3.CH(CH3).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	2.00M	U	H	K1=1.65 B2=2.97	1965CGa (33223)	172
By calorimetry: DH(K1)=20.9 kJ mol-1, DS=102.4 J K-1 mol-1; DH(K2)=7.5,DS=50									
Dy+++	gl	NaClO4	25°C	0.50M	U		K1=1.74 B2=2.57	1964SPa (33224)	173
*****									
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
Dy+++	gl	NaClO4	25°C	0.20M	U		K1=2.94 B2=5.45 K3=1.84 K4=1.2	1964DVa (33459)	174
Dy+++	EMF	NaClO4	25°C	1.0M	U		K1=2.83 B2=5.33 K3=1.72 K4=1.28	1964EVa (33460)	175

Method: quinhydrone electrode

Dy+++	gl	NaClO4	20°C	0.10M	U		K1=2.272 B2=5.90 B3=7.87	1964PKb (33461)	176
Dy+++	gl	NaClO4	25°C	0.50M	U		K1=2.95 B2=5.32 B3=7.16	1964SPa (33462)	177

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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
Dy+++	gl	KN03	25°C	0.10M	C		K1=3.07 B2=5.47 K3=1.67	1975PFb (33676)	178

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
Dy+++	EMF	KN03	25°C	0.10M	U		K1=3.03 B2=5.48 K3=2.00	1976PKb (33693)	179

Dy+++	gl	NaCl04	25°C	0.50M	U		K1=2.66 B2=4.87 B3=6.37	1964SPa (33694)	180
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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
Dy+++	gl	KN03	25°C	0.0	M T H		K1=5.41 K(Dy+HL=DyL+H)=-4.26	2003MBa (34296)	181

Extrapolated from data for I=0.07-0.32 M KN03. DH(K1)=-68.9 kJ mol<sup>-1</sup>,  
DS(K1)=-127.7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Dy+HL)=20.5, DS(Dy+HL)=-12.7.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	cal	non-aq	25°C	100%	U	H	K1=4.11 B3=9.49 B4=10.94	1997CDa (34763)	182

Medium: MeCN. DH(K1)=-34.4 kJ mol<sup>-1</sup>, DS=37; DH(B2)=-68.1, DS=89;  
DH(B3)=-101, DS=159; DH(B4)=-126, DS=213

C4H11O4P HL (4276)  
Diethylphosphoric acid; (C2H5O)2.P0.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	kin	oth/un	25°C		U		K1=1.96	1971MGb (35255)	183

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	EMF	NaClO4	25°C	100%	C	H	K1=6.03 B2=10.08	2000CDa (35772)	184
Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode.									
By calorimetry: DH(K1)=-47.0, DH(B2)=-102.2 kJ mol-1.									

Dy+++	ISE non-aq	25°C	100%	C	H	K1=3.57 B2=6.40	1993CCb (35773)	185
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-31.5 kJ mol-1, DS=-37; DH(B2)=-73.0, DS-122.								

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KCl	25°C	0.10M	U		K(Dy+HL)=8.79	1965DKb (35875)	186

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	cal	NaClO4	25°C	0.10M	U	H	K1=2.88 B2=4.64	1978COa (35939)	187
DH(K1)=10.7 kJ mol-1, DS=91.1; DH(K2)=3.55, DS=45.6									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	35°C	50%	U		K1=9.12	1984SSd (36032)	188

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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
Dy+++	cal	NaClO4	25°C	2.00M	U	H	K1=1.51	1976YCa (36301)	189
DH=7.32 kJ mol-1 and DS=55.23 J mol-1 K-1.									

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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
Dy+++	gl	diox/w	25°C	50%	M	I	K1=6.03 B2=11.17 K3=3.87	1994SSa (37062)	190

Medium: 50% dioxan, I=0 corr. At 35 C: K1=5.95, K2=5.03, K3=3.70

\*\*\*\*\*

C5H6O4                      H2L      Itaconic acid      CAS 97-65-4    (398)  
Methylenesuccinic acid; H00C.CH2.C(:CH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KCl	25°C	0.20M	U		K1=2.90 K(Dy+HL)=1.82	1989MFa (37417)	191

Dy+++	oth	NaCl04	?	0.10M	U		K1=2.22 B(DyHL)=6.40 B(DyH2L2)=12.62	1972STd (37418)	192
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C5H7NO3                      HL                                      (4313)  
Isonitrosoacetylacetone; H0.N:CH.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	20°C	50%	U		K1=4.94    B2=8.52	1971MAf (37523)	193

Medium: 50% v/v dioxan, 0.1 M NaCl04

\*\*\*\*\*

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
Dy+++	gl	diox/w	20°C	50%	U		K1=5.90    B2=10.95	1971MAf (37700)	194

\*\*\*\*\*

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
Dy+++	gl	NaCl04	20°C	0.10M	U	M		1973TZa (37937)	195

K(Dy(EDTA)+L)=3.63

Dy+++	gl	R4N.X	?	0.10M	U	M		1972FGa (37938)	196
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K(Dy(EDTA)+L)=2.63

Medium: NH4Cl

Dy+++	gl	alc/w	25°C	50%	U	I	K1=7.23	1971K0a (37939)	197
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Medium: 5-80% MeOH, 0.005 M DyCl3, 0.005 HL.    K1(5%)=6.19, K1(80%)=8.38

Dy+++	gl	NaCl04	25°C	2.0M	U		K1=5.74    B2=10.22	1964YCa (37940)	198
Dy+++	gl	oth/un	30°C	0.10M	U		K1=6.03    B2=10.70 K3=3.34	1960GFa (37941)	199

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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
Dy+++	gl	KCl	25°C	0.20M	U			K1=4.83	1989ZPa (38239)	200
In 70.4% v/v EtOH/H2O: K1 = 6.35										
*****										
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
Dy+++	gl	NaCl04	25°C	0.10M	U			K1=3.17 B2=5.13	1970RFa (38258)	201
*****										
C5H8O4		H2L						Glutaric acid CAS 110-94-1	(420)	
Pentanedioic acid; H00C.CH2.CH2.CH2.COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	NaCl04	25°C	0.10M	M	H		K1=3.13	1986CDb (38315)	202
DH=18.1 kJ mol-1, DS=121 J K-1 mol-1										
*****										
C5H8O7		H2L						CAS 40120-71-6	(3022)	
2,3,4-Trihydroxypentanedioic acid, Trihydroxyglutaric acid; H00C.(CH(OH))3.COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	KCl	24°C	0.20M	U			K1=3.70	1966DDa (38418)	203
*****										
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
Dy+++	gl	NaCl04	25°C	0.10M	U	T H		K1=5.77	1984SGb (38607)	204
35 C; K1=5.64; 45 C: 5.50. DH=-32.4 kJ mol-1, DS=2.3 J K-1 mol-1										
*****										
Dy+++	gl	NaCl04	25°C	0.10M	U			B2=5.67	1981ZLa (38608)	205
*****										
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
Dy+++	gl	NaCl	37°C	0.15M	U			K1=3.25	1997GMa (38724)	206
*****										
Dy+++	gl	NaCl04	25°C	0.10M	U			B2=5.31	1981ZLa (38725)	207
*****										
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
Dy+++	gl	KCl	25°C	0.10M	U		K1=7.00 B2=12.71 B3=15.48 B(Dy+20H+L)=18.58	1980MGc (39247)	208

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KNO3	25°C	0.10M	U		K1=3.16 B2=5.70 K3=1.72	1969PCa (40250)	209
Dy+++	EMF	NaClO4	25°C	1.0M	U		K1=3.03 B2=5.51 K3=1.66 K4=1.37	1964EVa (40251)	210

Method: quinhydrone electrode.

\*\*\*\*\*

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
Dy+++	gl	NaClO4	25°C	1.0M	U		K1=2.63	1968GCa (40276)	211

\*\*\*\*\*

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
Dy+++	gl	NaClO4	25°C	0.10M	U		K1=2.27 B2=3.91	1970RDa (40294)	212

\*\*\*\*\*

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
Dy+++	gl	KNO3	25°C	0.10M	C		K1=3.00 B2=5.36 K3=1.18 (?)	1975PFb (40309)	213

\*\*\*\*\*

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
Dy+++	gl	KNO3	25°C	0.20M	U	M	K1=6.55 K(Dy(phen)+L)=6.35	1990LSb (40697)	214

Dy+++	gl	KCl	25°C	0.10M	U	T	K1=4.03	1974BFa (40698)	215
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C6H5NO2 HL Picolinic acid CAS 98-98-6 (391)  
2-Pyridine-carboxylic acid; C5H4N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	20°C	0.10M	U		K1=5.11	1987EGb (42515)	216
Soln. contains 0.5 M t-butanol									
Dy+++	gl	KNO3	25°C	0.20M	U	M	K1=4.91	1987LSc (42516)	217
K(Dy(nta)+L)=4.41, K(Dy(edta)+L)=4.35.									
Dy+++	gl	NaClO4	25°C	0.50M	U		K1=3.83 B2=7.14 B3=9.67	1977GGb (42517)	218
Dy+++	gl	KNO3	25°C	0.10M	U		K1=4.16 K3=2.74 K4=2.11	1968PIa (42518)	219
Dy+++	gl	NaClO4	25°C	2.0M	U		K1=3.83 B2=6.92	1965YCa (42519)	220
Dy+++	gl	KNO3	25°C	0.10M	U		K1=4.22 B2=7.76 B3=10.8	1964THb (42520)	221

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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
Dy+++	gl	NaClO4	25°C	0.20M	U		K1=2.19	1973FDa (42668)	222
*****									
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
Dy+++	gl	NaClO4	25°C	2.0M	U		K1=3.00 B2=5.55	1965YCa (42831)	223
*****									
C6H5NO4	H2L							CAS 3316-09-4 (890)	
1,2-Dihydroxy-4-nitrobenzene; 02N.C6H3(OH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KNO3	25°C	0.10M	U		K1=9.53 B2=16.73	1981BDa (42922)	224
*****									
C6H5NO4	H2L							CAS 3163-07-3 (2711)	
2,4-Dihydroxy-1-nitrobenzene; 02N.C6H3(OH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++ sp KCl 25°C 0.10M M I K1=6.24 1989PEa (42950) 225  
\*\*\*\*\*

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

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

Dy+++ sp KCl 25°C 0.10M U K1=5.47 1987PLa (43106) 226  
\*\*\*\*\*

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  
-----

Dy+++ gl oth/un 30°C 0.10M U K1=6.13 B2=11.51 1972DSd (43129) 227  
\*\*\*\*\*

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  
-----

Dy+++ sp KCl 25°C 0.10M U K1=5.59 1987PLa (43148) 228  
\*\*\*\*\*

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  
-----

Dy+++ gl NaClO4 25°C 0.20M U K1=9.88 1998PJb (43743) 229

Dy+++ gl KNO3 25°C 0.10M U TIH K1=9.12 B2=15.94 1986NSa (43744) 230  
B(DyAL)=10.26

H2A=phthalic acid. DH(DyAL)=-46.4 kJ mol<sup>-1</sup>, DS=76.9 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Dy+++ gl KNO3 25°C 0.05M M I K1=10.39 B2=20.00 1981BDc (43745) 231  
Also data for I=0.2 and 0.35 M. At I=0, K1=10.95, K2=10.00.

-----  
Dy+++ gl NaClO4 25°C 0.10M U T K1=11.03 B2=20.83 1979NDa (43746) 232  
At 45 C, K1=10.31, K2=9.51. Medium ionic strength not stated.

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Dy+++ EMF NaCl 25°C 0.10M U K1=11.34 1969PKe (43747) 233  
\*\*\*\*\*

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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Dy+++ gl NaClO4 25°C 0.20M U K1=10.68 1998PJb (43956) 234  
\*\*\*\*\*

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
Dy+++	gl	NaCl04	30°C	0.10M	U	M		K1=6.42 B2=11.87 B(DyLA)=13.91 K(DyA+L)=7.03 K(DyB+L)=5.91 K(DyC+L)=5.30	1989N0b (44079)	235

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

Dy+++	gl	NaCl04	30°C	0.10M	U			K1=6.88 B2=12.49 K3=4.12	1970DSc (44080)	236
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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
Dy+++	gl	NaCl04	30°C	0.10M	U	M		K1=5.38 B2=10.51 B(DyLA)=12.96 K(DyA+L)=6.23 K(DyB+L)=5.75 K(DyC+L)=5.01	1989N0b (44201)	237

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

Dy+++	sp	KCl	25°C	0.10M	C	I		K1=6.215	1987PEa (44202)	238
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In 0.087 M KCl, K1=6.224.

Dy+++	gl	oth/un	30°C	0.10M	U			K1=6.39 B2=11.86 K3=4.35	1972DSd (44203)	239
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Dy+++	gl	NaCl04	25°C	2.0M	U			K1=5.74 B2=11.13	1964YCa (44204)	240
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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
Dy+++	gl	NaCl	20°C	0.10M	U			K1=4.48 K(Dy+HL)=3.46	1986SKb (44295)	241

\*\*\*\*\*

C6H6O8S2 H4L Tiron CAS 149-45-1 (104)

4,5-Dihydroxybenzene-1,3-disulfonic acid; (H0)2.C6H2(S03H)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	KNO3	25°C	0.10M	U	TIH		K1=14.76 B2=28.55	1980BDd (44417)	242

Data for I=0.05-0.2 M and for I=0.10 M (35 C). Also DH and DS values.

Dy+++ gl NaClO4 25°C 0.50M C K1=12.79 B2=21.96 1976LAb (44418) 243  
B(DyHL2)=29.69

Dy+++ gl NaClO4 25°C 0.10M U K1=14.36 1970SSi (44419) 244  
K(Dy+HL)=5.59

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

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

Dy+++ sp non-aq 25°C 100% U HM 1982KNa (44868) 245  
K(DyA3+L)=2.06

Medium: CCl4. HA=dipivaloylmethane

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

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

Dy+++ gl KNO3 25°C 0.10M U TIH K1=6.30 B2=11.24 1986NSa (44924) 246  
B(DyAL)=13.72

H2A=phthalic acid. DH(DyAL)=-71.8 kJ mol<sup>-1</sup>, DS=21.8 J K<sup>-1</sup> mol<sup>-1</sup>

Dy+++ gl mixed 25°C 50% U I K1=3.98 B2=7.14 1969BCa (44925) 247  
Medium: 50% DMSO, 0.12 M NaClO4. In 0.12 M NaClO4, 50% dioxan: K1=5.25,  
K2=4.32; Medium=0.12 NaClO4, 50% EtOH: K1=4.75, K2=3.66

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

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

Dy+++ gl NaClO4 15°C 0.10M U K1=9.00 1980ZMa (45125) 248

\*\*\*\*\*  
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

Dy+++ gl diox/w 25°C 50% M I K1=6.20 B2=11.57 1994SSa (45183) 249  
K3=4.20

Medium: 50% dioxan, I=0 corr. At 35 C: K1=6.02, K2=5.30, K3=3.83

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

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

-----  
Dy+++      gl   KCl      25°C 0.20M U              K1=4.05              1989ZPa (45465) 250  
In 70.4% v/v EtOH/H2O: K1 = 6.01

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

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

Dy+++      gl   NaClO4 25°C 2.00M U    IH                      1988HSa (45631) 251  
K(Dy+HL)=1.45

DH=4.6 kJ mol<sup>-1</sup>, DS=43.2 J K<sup>-1</sup> mol<sup>-1</sup>  
In 0.1 M NaClO4, K=1.3, DH=5.5 kJ mol<sup>-1</sup>, DS=43 J K<sup>-1</sup> mol<sup>-1</sup>

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

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

Dy+++      gl   NaClO4 25°C 0.10M U    TIH      K1=4.69      B2=8.35      1986AJc (45690) 252  
DH(K1)=-5.6 kJ mol<sup>-1</sup>, DS=67.2 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-6.1, DS=49.6

Dy+++      gl   NaClO4 30°C 0.10M U    IH      K1=4.53      B2=7.90      1983ASa (45691) 253  
DH(K1)=-4.8 kJ mol<sup>-1</sup>, DH(K2)=-4.4

\*\*\*\*\*  
C6H8O7                      H3L      Citric acid      CAS 77-92-9 (95)  
2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCCH2.CH(OH)(COOH).CH2COOH

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

Dy+++      gl   KNO3      25°C 1.0M M                      1986SZb (46069) 254  
K(Dy+H3L=DyHL+2H)=-2.74  
K(Dy+H3L=DyL+3H)=-6.13  
K(Dy+H3L=DyH-1L+4H)=-11.77  
K(Dy+2H3L=DyH2L2+4H)=-7.21

K(Dy+2H3L=DyL2+6H)=-14.15, K(Dy+2H3L=DyH-2L2+8H)=-29.2,  
K(Dy+2H3L=DyH-3L2+9H)=-28.4, K(Dy+2H3L=DyH-4L2+10H)=-37.1.

-----  
Dy+++      gl   KNO3      25°C 0.10M U      M                      1975TDa (46070) 255  
B(Dy(IDA)L)=11.4

-----  
Dy+++      dis oth/un 25°C 0.15M U                      1973HHc (46071) 256  
K(Dy+HL+L)=11.13

-----  
Dy+++      sol NaClO4 25°C 0.10M U              K1=7.58              1966SSg (46072) 257  
Kso=-11.49

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	EMF	NaClO4	25°C	1.00M	U		K1=5.83 B2=9.94	1991WPb (46327)	258
*****									
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
Dy+++	ISE	NaClO4	25°C	0.10M	C	I	K1=11.54	1997LBb (46763)	259
Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M. At I=0.0 M, K1=13.45.									
-----									
Dy+++	gl	alc/w	30°C	50%	C		K1=10.88	1994SOa (46764)	260
Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4.									
-----									
Dy+++	ISE	KNO3	25°C	0.10M	C		K1=11.68	1980NSf (46765)	261
Competitive method using Cd ion-selective electrode.									
-----									
Dy+++	gl	KNO3	20°C	1.0M	C		K2=8.36	1978GHb (46766)	262
-----									
Dy+++	gl	diox/w	30°C	50%	U	M		1978SGf (46767)	263
							K(DyL+A)=5.53		
HA=tropolone									
-----									
Dy+++	gl	NaClO4	25°C	0.50M	U	T	K1=11.58	1977GGb (46768)	264
-----									
Dy+++	EMF	KCl	25°C	1.0M	U	M		1977GMa (46769)	265
							K(DyA+L)=6.16 K(DyA+H2L)=1.49 K(DyA+H3L)=1.75 K(DyA+H4L)=3.45		
Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.									
-----									
Dy+++	cal	KNO3	20°C	0.10M	U	HM		1971GKb (46770)	266
							K(DyA+L)=4.28		
H4A=EDTA. DH(DyA+L)=-35.35 kJ mol-1, DS=-38.5 J K-1 mol-1. DH(DyAL)=-40.4 kJ mol-1, DS=295 J K-1 mol-1									
-----									
Dy+++	gl	KCl	20°C	0.10M	U		K1=11.61 B2=21.01	1965ANb (46771)	267
-----									
Dy+++	gl	KNO3	25°C	0.10M	U	T H T	K1=11.74 B2=21.15	1962MFb (46772)	268
15 C: K1=11.73,K2=9.57; 20 C: 11.71,9.48; 30 C: 11.79,9.37; 35 C: 11.81,9.27 40 C: 11.84,9.21. DH(K1)=9.4 kJ mol-1,DS=256 J K-1 m-1; DH(K2)=-23.4,DS=101									
-----									
Dy+++	vlt	KNO3	20°C	0.10M	U			1957NOa (46773)	269
							B(Dy2L3)=37.43		
-----									
Dy+++	vlt	KNO3	20°C	0.10M	U	T	K1=11.62	1956SGa (46774)	270

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

Dy+++      gl    KN03    35°C 0.10M U      K(Dy+HL)=3.99      1987RRC (47541) 271

$$K(\text{Dy}+\text{HL}+\text{cytidine})=8.76$$

Dy+++      gl   NaCl04 25°C 3.00M U      T K1=4.40    B2=9.14    1970JWa (47544) 274  
B(DyHL)=11.16

C6H10O2S HL (4370)  
Ethyl thioacetoacetate; CH3.CS.CH2.CO.OCH2.CH3

Dy+++      g1   mixed   30°C   75% U      K1=7.40      B2=13.45   1970DRa (47960) 275  
K3=5.77

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

Dy+++      gl    NaClO4 25°C 0.10M U      K1=2.981    B2=5.45    1966PRb (47986) 276  
K3=1.77  
K4=1.67

C6H10O3                      HL                      CAS 141-97-9    (3068)  
Ethyl acetoacetate; CH3.CO.CH2.CO2.C2H5

Dy+++      gl mixed   30°C   75% U      K1=6.78   B2=12.58   1969DRa (48010) 277  
Medium: 75% acetone, 0.1 M NaClO4

C6H10O4                      H2L      Adipic acid                      CAS 124-04-9    (401)  
1,6-Hexanedioic acid; HOO C.(CH2)4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++ gl NaClO4 25°C 0.10M M H K1=3.04 1986CDb (48068) 278  
DH=19.2 kJ mol<sup>-1</sup>, DS=123 J K<sup>-1</sup> mol<sup>-1</sup>

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C6H10O4S2 H2L CAS 7244-02-2 (438)  
1,2-Bis(carboxymethylthio)ethane; HOOC.CH2.S.CH2.CH2.S.CH2.COOH

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

Dy+++ gl NaClO4 25°C 1.00M C H K1=2.09 B2=3.48 1974GGa (48239) 279  
B(DyHL)=5.28

\*\*\*\*\*

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  
-----

Dy+++ oth NaClO4 25°C 0.10M U K1=4.54 1984AFa (48334) 280  
Laser excitation spectroscopy, competition method.

Dy+++ gl NaClO4 25°C 1.00M C H K1=4.67 B2=7.93 1974GGa (48335) 281  
B3=8.78  
B(DyHL2)=9.95

\*\*\*\*\*

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  
-----

Dy+++ gl NaClO4 25°C 0.10M U M K1=4.57 1997PPb (48470) 282  
K(Dy(edta)+L)=4.13

\*\*\*\*\*

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

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

Dy+++ gl alc/w 30°C 50% C K1=9.08 1994SOa (48710) 283  
Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4.

Dy+++ gl KNO3 20°C 1.00M U K1=8.22 B2=16.18 1974CmD (48711) 284  
K(DyL2(OH)+H)=10.18

Dy+++ oth NaNO3 20°C 0.10M U M K1=9.1 B2=17.20 1966JMc (48712) 285  
Method: paper electrophoresis. Mixed complexes with HEDTA

Dy+++ gl KCl 25°C 0.10M U K1=8.88 B2=16.40 1965DTa (48713) 286

Dy+++ ISE KNO3 25°C 0.10M U K1=9.08 B2=17.38 1963TLa (48714) 287

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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
Dy+++	gl	R4N.X	25°C	0.10M	C		K1=8.31	1988CCb (49230)	288
Dy+++	gl	KNO3	25°C	0.10M	U		K1=8.31 B2=15.09	1962THb (49231)	289
*****									
C6H12O2		HL					CAS 142-62-1	(964)	
Hexanoic acid; <chem>CH3.(CH2)4.COOH</chem>									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaCl	20°C	0.10M	U		K1=2.94	1986GKb (49423)	290
*****									
C6H12O3		HL					(3662)		
2-Hydroxy-2-methylpentanoic acid; (Methylpropylglycolic acid)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	EMF	NaCl04	25°C	1.0M	U		K1=3.00 B2=5.47 K3=1.86 K4=1.12	1964EVa (49480)	291

Method: quinhydrone electrode.

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C6H12O7		HL					Gluconic acid	CAS 526-95-4	(904)
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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
Dy+++	EMF	alc/w	25°C	80%	U	I	K1=5.49	1966KRb (49705)	292
Medium: 80% MeOH. K1=4.67(50%)									

Dy+++	gl	KCl	25°C	0.20M	U		K1=2.30 B2=4.57	1963K0c (49706)	293
*****									
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
Dy+++	gl	KNO3	25°C	0.20M	U	M	K1=6.17 K(Dy(phen)+L)=6.05	1990LSb (50070)	294
*****									
C6H13NO2		HL					Norleucine	CAS 616-06-8	(602)

2-Aminohexanoic acid (2-Aminocaproic acid) CH3.(CH2)3.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaCl04	22°C	0.10M	M	M	K1=4.93 B2=9.56 B3=13.45	1991DTa (50173)	295

$$K(\text{DyA}+\text{L})=8.65$$

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

Dy+++ gl KCl 20°C 0.20M U K1=4.43 B2=8.43 1990PLa (50174) 296  
\*\*\*\*\*

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

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

Dy+++ gl KCl 20°C 0.20M U K1=4.93 B2=10.48 1990PLa (50213) 297  
\*\*\*\*\*

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

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

Dy+++ gl KNO3 20°C 0.10M U K1=5.41 B2=10.45 1982RFa (50346) 298

Dy+++ gl KCl 30°C 0.10M U K1=5.55 B2=9.99 1973MSe (50347) 299

Dy+++ gl alc/w 20°C 50% U I K1=6.69 1970KRa (50348) 300  
Medium: 0-80% MeOH, 0.03 M KCl. K1(0%)=5.49, K1(20%)=6.0, K1(80%)=7.8

Dy+++ oth NaNO3 20°C 0.10M U K1=7.6 B2=13.80 1966JMc (50349) 301  
Method: paper electrophoresis

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

Dy+++ gl NaCl 37°C 0.15M U M K1=2.94 1997GMa (50574) 302  
B(DyHL)=11.29  
B(DyH2AL)=25.03

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

C6H15N3O3 L (6613)  
1,3,5-Triamino-1,3,5-trideoxy-cis-inositol,5-Amino-5-deoxy-streptamine;

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

Dy+++ gl KCl 25°C 0.10M C 1998HGa (51448) 303  
B(DyH-6L2)=-14.6

C6H18N2O6P2 H4L (1363)  
N,N'-Dimethyldiaminoethane-N,N'-dimethylphosphonic acid;  
CH3N(CH2PO3H2).CH2.CH2.N(CH2.PO3H2)CH3

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



\*\*\*\*\*  
 C7H5NO4 HL CAS 62-23-7 (489)  
 4-Nitrobenzoic acid; O2N.C6H4.COOH

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

Dy+++ gl NaClO4 25°C 0.10M M H K1=1.63 1999YKa (52904) 311  
 By calorimetry: DH(K1)=8.69 kJ mol<sup>-1</sup>, DS(K1)=60.4 J K<sup>-1</sup> mol<sup>-1</sup>.

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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  
 -----

Dy+++ gl NaClO4 25°C 0.10M C H K1=1.73 1986CLc (53232) 312  
 DH=8.5 kJ mol<sup>-1</sup>, DS=62 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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  
 -----

Dy+++ gl NaClO4 25°C 0.10M C H K1=1.89 1986CLc (53252) 313  
 DH(K1)=10.1 kJ mol<sup>-1</sup>, DS=70 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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  
 -----

Dy+++ gl NaClO4 25°C 0.10M C H T 1993ALa (53365) 314  
 B(1,1,1)=12.28  
 B(1,0,1)=7.58  
 B(1,0,2)=12.85  
 B(1,-2,1)=-8.42

B(p,q,r); pDy+qH+rL=(Dy)pHqLr

\*\*\*\*\*

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  
 -----

Dy+++ gl diox/w 30°C 50% M I K1=4.82 B2= 9.48 1978SSi (53543) 315  
 K3=3.19

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
Dy+++	gl	KNO3	25°C	0.10M	U		K1=7.23 K3=5.02 K4=3.72	1969CMB (53669)	316

\*\*\*\*\*

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
Dy+++	cal	NaClO4	25°C	0.10M	U	H	K1=1.96 B2=3.64	1982CBc (53828)	317

DH1= 10.3 kJ mol<sup>-1</sup>, DS1= 72 J K<sup>-1</sup> mol<sup>-1</sup>

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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
Dy+++	gl	NaClO4	25°C	0.1M	C	H		1996HYa (54184)	318

By calorimetry: DH(K1)=3.32 kJ mol<sup>-1</sup>, DH(B2)=8.77 J K<sup>-1</sup> mol<sup>-1</sup>

Dy+++	gl	NaClO4	25°C	0.10M	C	T		1989HMa (54185)	319
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K(Dy+HL)=1.71  
K(DyHL+HL)=2.05

Dy+++	gl	KNO3	25°C	0.10M	U	TIH	T K1=10.26 B(DyAL)=15.80	1986NSa (54186)	320
-------	----	------	------	-------	---	-----	-----------------------------	-----------------	-----

H2A=phthalic acid. DH(DyAL)=-47.9 kJ mol<sup>-1</sup>, DS=141.9 J K<sup>-1</sup> mol<sup>-1</sup>

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C7H6O3 H2L CAS 99-06-9 (1370)  
3-Hydroxybenzoic acid; HO.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	C	H		1988LLa (54376)	321

K(Dy+HL)=2.00

DH=10.97 kJ mol<sup>-1</sup>, DS=75.0 J K<sup>-1</sup> mol<sup>-1</sup>

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	M	H	K1=1.64	1999YKa (54409)	322

By calorimetry: DH(K1)=12.44 kJ mol<sup>-1</sup>, DS(K1)=73.1 J K<sup>-1</sup> mol<sup>-1</sup>.

Dy+++	gl	NaClO4	25°C	0.10M	C	H		1988LLa (54410)	323
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K(Dy+HL)=2.13

DH=12.25 kJ mol<sup>-1</sup>, DS=81.8 J K<sup>-1</sup> mol<sup>-1</sup>

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C7H6O4                      H3L      Resorcylic acid    CAS 89-86-1    (876)  
2,4-Dihydroxybenzoic acid, b-Resorcylic acid; C6H3(OH)2.COOH

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

Dy+++            ix    NaClO4 30°C 0.10M U                      K1=13.30                      1971AWa (54521) 324  
Polarography also used. DH=19.1 kJ mol<sup>-1</sup>, DS=345 J K<sup>-1</sup> mol<sup>-1</sup>

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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  
-----

Dy+++            gl    NaClO4 25°C 0.20M U                      K1=10.45                      1998PJb (54668) 325

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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  
-----

Dy+++            gl    KNO3    20°C 0.10M U T                      K1=7.98                      1982DBa (54964) 326

Dy+++            gl    NaClO4 20°C 1.0M U                      K1=7.15      B2=13.01    1972CBb (54965) 327

Dy+++            sp    NaClO4 20°C 0.10M U                      K1=8.29      B2=14.89    1968KTb (54966) 328  
K(Dy+HL)=2.42

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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  
-----

Dy+++            gl    NaClO4 25°C 0.50M C                      T K1=8.82      B2=14.53    1976LAc (55093) 329

\*\*\*\*\*

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  
-----

Dy+++            gl    NaClO4 25°C 0.10M C                      K1=2.27      B2=4.39    1989HMa (55216) 330

Dy+++            gl    NaClO4 25°C 0.10M U      H      K1=4.65                      1982KYc (55217) 331  
By calorimetry, DH(K1)=8.83 kJ mol<sup>-1</sup>, DS(K1)=118.66 J K<sup>-1</sup> mol<sup>-1</sup>.

Dy+++            gl    NaClO4 22°C 0.20M U                      K1=3.2                      1967SSj (55218) 332

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	M	H	K1=1.98	1999YKa (55374)	333
By calorimetry: DH(K1)=11.57 kJ mol <sup>-1</sup> , DS(K1)=76.8 J K <sup>-1</sup> mol <sup>-1</sup> .									

Dy+++	gl	KCl	25°C	0.20M	U		K1=2.37	1977EBa (55375)	334
*****									
C7H7NO3		H2L					CAS 89-73-6	(204)	
2-Hydroxybenzohydroxamic acid (salicylhydroxamic acid); HO.C6H4.CO.NHOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	mixed	25°C	75%	U			1970SEa (55590)	335
							K(Dy+HL)=7.72		
							K(DyHL+HL)=7.00		
							K(Dy(HL)2+HL)=5.06		

Medium: 75% acetone, 0.1 M NaClO4

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KCl	25°C	0.20M	M	T H	K1=8.43	1991BPb (55685)	336
							K(Dy+OH+L)=15.81		
DH(K1)=-99 kJ mol <sup>-1</sup> , DS(K1)=-168 J K <sup>-1</sup> mol <sup>-1</sup> . DH(Dy(OH)L)=-261,									
DS(Dy(OH)L)=-570. 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
Dy+++	gl	mixed	25°C	50%	U	I	K1=4.40 B2=8.48	1969BCb (56064)	337
Medium: 50% DMSO, 0.1 M 2NaClO4. In 50% dioxan, 0.12 M NaClO4: K1=5.67,									
K2=4.48; 50% EtOH, 0.12 M NaClO4: K1=5.09, K2=3.86									

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
Dy+++	sp	KCl	25°C	0.10M	M	I	K1=6.62	1986PLb (56124)	338
*****									
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
Dy+++	sp	KCl	25°C	0.10M	M	I	K1=6.26	1986PLb (56143)	339

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

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Dy+++           gl    KNO3    25°C 0.10M U            K1=4.29    B2=6.81    1971PJb (56729) 340  
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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  
-----  
Dy+++           gl    KNO3    25°C 0.10M U            K1=6.26    B2=11.82    1963THb (56803) 341  
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C7H11NO6                      H3L                      (2926)  
2-Aminobutanoic-N-propane-1,3-dioic acid; HOOCH(CH2H5)NH.CH(COOH)2

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Dy+++           gl    KNO3    25°C 0.1M U            K1=9.00            1982KKc (56841) 342  
\*\*\*\*\*

C7H11NO6                      H3L            MNTA                      (1026)  
Nitrilo(2-propanoic)-diethanoic acid; HOOCH(CH3).N(CH2.COOH)2

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Dy+++           gl    KNO3    20°C 0.10M U            K1=12.45    B2=22.09    1974RMg (56908) 343  
\*\*\*\*\*

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  
-----  
Dy+++           gl    KNO3    25°C 0.15M M T H            K1=3.94            1983SKb (57117) 344  
Data for 35 and 45 C. At 35 C, DH(K1)=22 kJ mol<sup>-1</sup>, DS(K1)=149 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Dy+++           gl    KNO3    25°C 0.15M U T H            K1=3.98            1979SKe (57118) 345  
At 35 C, K1=4.04; at 45 C, K1=4.08. At 35 C, DH(K1)=9.0 kJ mol<sup>-1</sup>,  
DS(K1)=107 J K<sup>-1</sup> mol<sup>-1</sup>

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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  
-----  
Dy+++           gl    NaClO4 25°C 1.0M U            K1=2.43    B2=4.33    1967STd (57258) 346  
\*\*\*\*\*

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
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Dy+++	gl	mixed	30°C	75%	U		K1=8.36	1971DRb (57271)	347
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Medium: 75% acetone, 0.1 M

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C7H12O4	H2L						CAS 510-20-3 (482)		
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Diethylpropanedioic acid (Diethylmalonic acid); HOOC.C(C2H5)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++	gl	KNO3	25°C	0.10M	U		K1=4.61 B2=7.29	1968PFa (57360)	348
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C7H12O6	HL	Quinic acid					CAS 77-95-2 (2578)		
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1,3,4,5-Tetrahydroxycyclohexane-1-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++	gl	NaCl	20°C	0.10M	U		K1=2.94	1977SSc (57393)	349
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Dy+++	EMF	NaCl04	25°C	1.0M	U		K1=2.76 B2=4.85 K3=1.53 K4=0.90	19670Ta (57394)	350
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Method: quinhydrone electrode

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++	gl	KNO3	20°C	0.10M	U		K1=8.82 B2=16.81	1980RPa (57609)	351
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C7H14O3	HL						CAS 63204-98-9 (3738)		
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2-Hydroxy-2,4-dimethylpentanoic acid; (CH3)2.CH.CH2.C(CH3)(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++	EMF	NaCl04	25°C	1.0M	U T		K1=3.18 B2=5.64 K3=1.75 K4=1.18	1965TVa (57859)	352
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Method: quinhydrone electrode

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C7H14O3	HL						CAS 65311-45-1 (6266)		
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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
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

Dy+++	gl	NaCl04	25°C	0.10M	C		K1=2.86 B2=4.68	1976SPa (57871)	353
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C7H15NO4	HL						CAS 41244-51-3 (4459)		
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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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Dy+++	gl	KNO3	20°C	0.10M	U			K1=5.18 B2=9.88	1982RFa (57933)	354
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C7H21N2O10P3 H6L (7004)

N-(2-Hydroxyethyl)-1,2-diaminoethane-N,N'-trimethylenephosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	gl	KCl	25°C	0.10M	U			K1=11.75	1974KRd (58371)	355
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K(Dy+HL)=8.44

K(Dy+H2L)=5.70

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C8H5N5O6 H3L Murexide (453)

Purpuric acid (Murexide is ammonium salt);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	sp	alc/w	12°C	50%	U				1972BLa (58495)	356
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K(Dy+H2L)=4.52

Medium: 50% EtOH, 0.1 M NaClO4

Dy+++	sp	KNO3	12°C	0.10M	U				1965GEa (58496)	357
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K(Dy+H2L)=3.78

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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
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Dy+++	cal	non-aq	25°C	100%	C	H			2004MIa (58610)	358
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Method: calorimetric titration. Medium: chloroform. DH(DyL3+A)=6.9 kJ

mol-1, DS=79 J K-1 mol-1; DH(DyL3+2A)=3.7, DS=116. HA is benzoic acid.

Dy+++	gl	alc/w	22°C	80%	U			K1=6.42 B2=12.22	1995MTa (58611)	359
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K3=4.83

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

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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
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Dy+++	gl	KNO3	25°C	0.10M	U			K1=4.31 B2=7.52	1986NSa (58964)	360
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Dy+++	gl	NaClO4	30°C	0.10M	U			K1=4.53 B2=8.02	1966KPb (58965)	361
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C8H6O4 H2L Isophthalic aci CAS 212-91-5 (1619)

Benzene-1,3-dicarboxylic acid; C<sub>6</sub>H<sub>4</sub>(COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	cal	NaClO <sub>4</sub>	25°C	0.10M	U	H		K <sub>1</sub> =2.67	1982CBc (59049)	362
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DH= 13.11 kJ mol<sup>-1</sup>, DS= 94 J K<sup>-1</sup> mol<sup>-1</sup>

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C <sub>8</sub> H <sub>7</sub> NO <sub>2</sub>		HL						CAS 532-54-7	(4363)	
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Isonitrosoacetophenone, Phenylglyoxal 2-oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	gl	diox/w	20°C	50%	U			K <sub>1</sub> =6.18 B <sub>2</sub> =11.84	1971MAf (59098)	363
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Medium: 50% v/v dioxan, 0.1 M NaClO<sub>4</sub>

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C <sub>8</sub> H <sub>7</sub> O <sub>2</sub> Cl		HL						CAS 1450-74-4	(6325)	
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2-Hydroxy-5-chloro-acetophenone; Cl(HO)C<sub>6</sub>H<sub>3</sub>.CO.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	gl	alc/w	25°C	20%	M	TIH		K <sub>1</sub> =6.362	2000KDa (59215)	364
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K(Dy(egta)+L)=3.516

Medium contains 0.1 M NaNO<sub>3</sub>. Data for 0.05, 0.15 M NaNO<sub>3</sub> and 35 and 45 C.

At I=0, K<sub>1</sub>=6.571, K(Dy(egta)+L)=3.696. DH(Dy(egta)L)=-16.5 kJ mol<sup>-1</sup>.

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C <sub>8</sub> H <sub>8</sub> N <sub>2</sub> O		L						CAS 4856-97-7	(3820)	
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2-(Hydroxymethyl)benzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	gl	diox/w	30°C	50%	U	T H		B <sub>2</sub> =16.79	1988NOa (59309)	365
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40 C: B<sub>2</sub>=16.63; 50 C: B<sub>2</sub>=16.48. DH(B<sub>2</sub>)=-28.9 kJ mol<sup>-1</sup>, DS=226.1 J K<sup>-1</sup> mol<sup>-1</sup>

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C <sub>8</sub> H <sub>8</sub> N <sub>2</sub> O <sub>2</sub>		HL						Phenylglyoxime	(3222)	
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Phenylglyoxime; C<sub>6</sub>H<sub>5</sub>.C(:N.OH).CH:N.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	gl	diox/w	20°C	50%	U			K <sub>1</sub> =7.23 B <sub>2</sub> =13.62	1971MAf (59333)	366
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Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>

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C <sub>8</sub> H <sub>8</sub> N <sub>4</sub> O <sub>5</sub>		L						(6097)		
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2-Acetylpyridinethiosemicarbazone; C<sub>5</sub>H<sub>4</sub>N.CO.CH:N.NH.CS.NH<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	gl	alc/w	25°C	75%	C	I		K <sub>1</sub> =7.93 B <sub>2</sub> =15.36	1988GSa (59406)	367
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In 75%(v/v) ethanol/water; 0.1 M NaClO<sub>4</sub>. I=0.2 M: K<sub>1</sub>=7.88, K<sub>2</sub>=7.31;  
I=0.05 M: K<sub>1</sub>=8.08, K<sub>2</sub>=7.52; I=0.02 M: K<sub>1</sub>=8.24, K<sub>2</sub>=7.77

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C8H802 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
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Dy+++	gl	alc/w	25°C	20%	M	TIH	K1=6.715 K(Dy(egta)+L)=4.512	2000KDa (59459)	368
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Medium contains 0.1 M NaNO3. Data for 0.05, 0.15 M NaNO3 and 35 and 45 C.  
At I=0, K1=6.945, K(Dy(egta)+L)=4.720. DH(Dy(egta)L)=-19.6 kJ mol-1.

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C8H802 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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Dy+++	gl	NaCl04	25°C	0.1M	C	H	K1=1.77	1996HYa (59539)	369
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By calorimetry: DH(K1)=15.57 kJ mol-1

Dy+++	gl	NaCl04	25°C	0.10M	C	H	K1=1.77	1990HYa (59540)	370
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By calorimetry: DH(K1)=15.6 J K-1 mol-1

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C8H802 HL CAS 583-80-2 (3191)  
beta-Methyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++	sp	alc/w	?	3%	U		K1=7.36	1967GDb (59594)	371
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Medium: 3% EtOH, 0.2 M NaCl04

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C8H803 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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Dy+++	gl	alc/w	25°C	20%	M	TIH	K1=6.508 K(Dy(egta)+L)=4.686	2000KDa (59676)	372
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Medium contains 0.1 M NaNO3. Data for 0.05, 0.15 M NaNO3 and 35 and 45 C.  
At I=0, K1=6.720, K(Dy(egta)+L)=4.905. DH(Dy(egta)L)=-18.9 kJ mol-1..

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C8H803 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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Dy+++	gl	NaCl04	25°C	0.10M	M	H	K1=1.89	1988CLb (59724)	373
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DH=9.85 kJ mol-1, DS=69 J K-1 mol-1

Dy+++	gl	alc/w	25°C	42%	U		K1=2.5	1983PMa (59725)	374
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Dy+++	gl	diox/w	30°C	76%	M		K1=7.59	1978PMa (59726)	375
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Medium: 76% v/v dioxane/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>.

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C8H803                      HL      Mandelic Acid      CAS 611-72-3    (80)  
2-Phenyl-2-hydroxyethanoic acid; C<sub>6</sub>H<sub>5</sub>.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO <sub>4</sub>	25°C	0.10M	C		K1=3.03    B2=5.29	1989HMa (59820)	376

Dy+++	gl	NaClO <sub>4</sub>	25°C	2.0M	U	T	K1=2.57	1972DCb (59821)	377
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C8H803                      HL      m-Anisic acid      CAS 586-38-9    (2804)  
3-Methoxybenzoic acid; CH<sub>3</sub>O.C<sub>6</sub>H<sub>4</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO <sub>4</sub>	25°C	0.10M	M	H	K1=2.01	1988CLb (59908)	378

DH=12.0 kJ mol<sup>-1</sup>, DS=79 J K<sup>-1</sup> mol<sup>-1</sup>

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C8H803                      HL      p-Anisic acid      CAS 100-09-4    (1373)  
4-Methoxybenzoic acid; CH<sub>3</sub>O.C<sub>6</sub>H<sub>4</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO <sub>4</sub>	25°C	0.10M	M	H	K1=2.00	1988CLb (59948)	379

DH=12.6 kJ mol<sup>-1</sup>, DS=81 J K<sup>-1</sup> mol<sup>-1</sup>

Dy+++	gl	diox/w	30°C	76%	M		K1=7.51	1978PMa (59949)	380
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Medium: 76% v/v dioxane/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>.

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C8H804                      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
Dy+++	gl	diox/w	35°C	50%	U		K1=4.72    B2=8.68	1971MAa (60084)	381

Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>

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C8H809                      H4L                      (6951)  
Tetrahydrofuran-2,3,4,5-tetracarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	cal	NaClO <sub>4</sub>	25°C	0.10M	C	H		2000MNa (60129)	382

DH(Dy+H<sub>2</sub>L)=2.71 kJ mol<sup>-1</sup>, DS=132 J K<sup>-1</sup> mol<sup>-1</sup>. DH(Dy+2H<sub>2</sub>L)=-17.7, DS=130.

Dy+++	gl	NaClO <sub>4</sub>	25°C	0.10M	C		K1=10.46    B2=15.67	1995JNa (60130)	383
							B(DyH <sub>2</sub> L)=17.59		
							B(DyHL)=14.79		
							B(DyH-1L)=2.19		

B(DyH-2L)=-8.07  
 B(DyH4L2)=32.20, B(DyH3L2)=29.11, B(DyH2L2)=25.70, B(DyHL2)=20.66  
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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
Dy+++	gl	KNO3	30°C	0.10M	C	M	K1=6.25 B2=12.05 K3=4.95 K(Dy(hedta)+L)=4.60	1987RSc (60340)	384

hedta is N-hydroxyethylldiaminoethane-N,N',N'-triethanoic acid.

Dy+++	gl	KNO3	20°C	0.10M	M	T	K1=6.32 B2=12.20 K3=5.04	1986RSc (60341)	385
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Data for 20-50 C. At 30 C, K1=6.25, K2=5.80, K3=4.95.

\*\*\*\*\*  
 C8H9NO4 H2L (4520)  
 Dehydroethanoic acid oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	35°C	50%	U		K(Dy+HL)=4.57 K(Dy+2HL)=8.35	1971MAa (60490)	386

Medium: 50% dioxan, 0.01 M NaClO4  
 \*\*\*\*\*

C8H9N3O2 L CAS 7254-31-4 (1266)  
 Acylnicotinoyl hydrazide; C5H4N.CO.NH.NH.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	U		K1=13.85 B2=25.00	1980ZMa (60566)	387

\*\*\*\*\*  
 C8H10N06P H3L Codecarboxylase CAS 41468-25-1 (2555)  
 Pyridoxal-5-phosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KCl	25°C	0.50M	U		K(Dy+H3L)=0.54 K(Dy+H2L)=2.10	1978AAa (60702)	388

\*\*\*\*\*  
 C8H10N6O2S2 H2L (2746)  
 2,5-Dihydroxybenzoquinone bis-thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	50%	C	TIH	K1=5.15 B2=9.32	1989GDa (60813)	389

DH(K1)=-87.03 kJ mol-1

C8H10O4 L CAS 34241-51-5 (5701)  
3-Acetyl-6-methylhydropyrane-2,4-dione;

\*\*\*\*\*

C8H10O5                      H2L                      CAS 145-73-7    (138)  
7-Oxa-bicyclo[2.2.1]-heptan-2,3-dicarboxylic acid;

\*\*\*\*\*

C8H11NO8                      H4L                      CAS 7408-20-0 (2608)  
Amino-di(butanedioic acid);HN(CH(COOH)CH<sub>2</sub>.COOH)<sub>2</sub>

\*\*\*\*\*

C8H1104P                      H2L                      (4536)  
(alpha-Hydroxy-alpha-methylbenzyl)phosphonic acid;

\*\*\*\*\*

C8H12N2O3                      H2L                      Barbitol                      CAS 57-44-3    (2744)  
5,5-Diethylbarbituric acid, Veronal, Barbitone;

\*\*\*\*\*

C8H12N2O8	H4L	CAS 35039-85-1 (4537)
1,2-Diaminoethane-N,N'-dimalonic acid; (HOOC)2.CH.NH.CH2.CH2.NH.CH(COOH)2		

\*\*\*\*\*

C8H12O2                      HL                      CAS 874-23-7    (3203)

2-Acetylcyclohexanone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	mixed	25°C	75%	U		K1=8.96 B2=17.17 K3=7.95	1971DRa (61667)	397

Medium: 75% acetone, 0.1 M NaClO4

\*\*\*\*\*  
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
Dy+++	gl	NaClO4	25°C	0.10M	M	H	K1=4.30	1986CDb (61706)	398

DH=16.6 kJ mol<sup>-1</sup>, DS=138 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*  
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
Dy+++	gl	KNO3	20°C	0.10M	U		K1=9.81 B2=17.21	1974RMg (61761)	399

\*\*\*\*\*  
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
Dy+++	gl	KNO3	20°C	0.10M	U		K1=11.45 B2=20.12	1974RMg (61785)	400

\*\*\*\*\*  
C8H14O3 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
Dy+++	gl	mixed	30°C	75%	U		K1=9.10	1971DRb (62075)	401

Medium: 75% acetone, 0.1 M

\*\*\*\*\*  
C8H16O3 HL CAS 58888-84-9 (3807)  
2-Hydroxy-2-propylpentanoic acid; CH3.CH2.CH2.C(OH)(CH2.CH2.CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	EMF	NaClO4	25°C	1.0M	U		K1=3.08 B2=5.57	1965TVa (62631)	402

Method: quinhydrone electrode

\*\*\*\*\*  
C8H16O4 L 12-Crown-4 CAS 294-93-9 (174)  
1,4,7,10-Tetraoxacyclododecane; cyclo(-O.(CH2.CH2.O)3.CH2.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++ gl non-aq 25°C 100% C K1=5.13 B2=6.30 1989BPa (62668) 403  
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

\*\*\*\*\*  
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  
-----

Dy+++ gl non-aq 25°C 100% C K1=3.58 1989BPa (62984) 404  
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

\*\*\*\*\*  
C8H19NO5 L Bis-tris CAS 6976-37-0 (2827)  
Bis-(2-hydroxyethyl)imino-tris(hydroxymethyl)methane;

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

Dy+++ gl NaCl 30°C 0.10M C K1=5.48 B2= 8.76 2002Nwa (63057) 405  
Constants expressed on the molality scale.

\*\*\*\*\*  
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  
-----

Dy+++ kin oth/un 25°C ? U K1=2.97 1971MGb (63180) 406

\*\*\*\*\*  
C8H22N2O6P2 H4L CAS 13516-59-1 (3850)  
2,2'-(Ethylenedi-imino)bis(propylphosphonic acid);

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

Dy+++ gl KCl 25°C 0.10M U K1=12.89 1965DKb (63336) 407  
K(Dy+HL)=6.40

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

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

Dy+++ gl oth/un 25°C 0.10M U K1=12.89 1976MDa (63353) 408  
K(Dy+H2L)=6.20

\*\*\*\*\*  
C8H22N2O6P2 H4L (1365)  
N,N'-Dimethyl-diaminoethane-N,N'-diethylphosphonic acid;  
(CH3.N(CH2.CH2.PO3H2).CH2)2

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

Dy+++ gl oth/un 25°C 0.10M U 1976MDa (63365) 409

\*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	oth/un	25°C	0.10M	M			K1=11.95 K(Dy+HL)=8.89 K(Dy+H2L)=5.29	1976MRa (63369)	410

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	35°C	75%	U		K1=7.20 K3=5.40	B2=13.25	1971MAb (63559)

\*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	sp	diox/w	20°C	50%	U			K1=2.62 B2=4.51	1977MBb	(63604)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	U		K1=5.45 K3=4.1	B2=10.30	1973MAa (63692)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	U	I	K1=5.86 B2=10.96 B3=15.70	1987BCd	(63785)

Dy+++            gl   oth/un 20°C 0.10M U            K1=6.31            1977SKd (63786) 415  
 \*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++ cal KNO3 20°C 0.10M U HM 1971GKb (64530) 424  
K(DyA+L)=4.56

DH(DyA+L)=-23.0 kJ mol<sup>-1</sup>, DS=8.77 J K<sup>-1</sup> mol<sup>-1</sup>

DH(DyAL): DH=-28.05, DS=341.5. H4A=EDTA

\*\*\*\*\*

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

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

Dy+++ sp NaNO3 25°C 0.10M C K1=8.10 19850Hb (64700) 425  
K(Dy+HL)=4.71  
K(DyL+H)=6.05

\*\*\*\*\*

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

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

Dy+++ gl NaClO4 25°C 0.20M U K1=8.28 B2=15.06 1966GDa (64936) 426  
K3=4.00

\*\*\*\*\*

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  
-----

Dy+++ gl KCl 30°C 0.10M U K1=4.20 B2= 7.85 1996SZa (64972) 427

\*\*\*\*\*

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  
-----

Dy+++ gl diox/w 27°C 0.10M U K1=4.58 1982LMa (65159) 428

\*\*\*\*\*

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  
-----

Dy+++ gl NaClO4 25°C 0.1M C H K1=1.96 B2= 3.62 1996HYa (65363) 429  
By calorimetry: DH(K1)=13.60 kJ mol<sup>-1</sup>, DH(B2)=17.48 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Dy+++ gl NaClO4 25°C 0.10M C H K1=1.96 B2=3.62 1990HYa (65364) 430

By calorimetry: DH(K1)=13.6 J K<sup>-1</sup> mol<sup>-1</sup>, DH(K2)=3.9

\*\*\*\*\*

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
Dy+++	gl	NaClO4	25°C	0.10M	C		K1=2.19 B2=3.82	1989HMa (65457)	431
*****									
C9H1003		HL					CAS 529-64-6	(1601)	
2-Phenyl-3-hydroxypropanoic acid; HO.CH2.CH(COOH)C6H5									
Dy+++	gl	NaClO4	25°C	0.10M	C		K1=2.10 B2=3.92	1989HMa (65471)	432
*****									
C9H1004		HL					CAS 1521-38-6	(8489)	
2,3-Dimethoxybenzoic acid;									
Dy+++	gl	diox/w	25°C	76%	M		K1=7.35	1978PMa (65529)	433
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.									
*****									
C9H1004		HL					CAS 91-52-1	(8490)	
2,4-Dimethoxybenzoic acid;									
Dy+++	gl	diox/w	25°C	76%	M		K1=7.78	1978PMa (65536)	434
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.									
*****									
C9H1004		HL					CAS 1466-76-8	(8491)	
2,6-Dimethoxybenzoic acid;									
Dy+++	gl	diox/w	25°C	76%	M		K1=7.01	1978PMa (65543)	435
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;									
Dy+++	gl	KCl	30°C	0.10M	C		K1=4.16 B2=7.07	1996SZa (65568)	436
For the -2,5-dien-2-exo isomer, K1=4.20, B2=7.85.									
*****									
C9H1004		H2L					CAS 3853-88-1	(5687)	
endo-cis-Bicyclo-[2,2,1]-5-hepten-2,3-dicarboxylic acid;									
Dy+++	gl	NaClO4	24°C	0.10M	U		K1=4.42	1986ZBa (65583)	437

$$K(\text{Dy}+\text{HL})=1.60$$

\*\*\*\*\*

C9H10O5 H2L CAS 54384-22-4 (8406)  
1-Methyl-(exo,exo)-7-oxabicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KCl	30°C	0.10M	U		K1=5.17 B2= 8.43	1996SZa (65600)	438

\*\*\*\*\*

C9H10O5 H2L (7233)  
1-Methyl-7-oxa-bicyclo[2.2.1]hept-5-en-2-exo,3-cis-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KCl	30°C	0.10M	C		K1=5.17 B2=8.43	1996SZa (65615)	439

\*\*\*\*\*

C9H10O8 H4L CAS 3724-52-5 (1264)  
cis-1,2,3,4-Cyclopentanetetra-carboxylic acid; C5H6.(COOH)4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	30°C	0.20M	U T		K1=10.60 K1=10.75 when T=40. K1=10.95 when T=50.	1979NSb (65641)	440

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaCl	25°C	0.15M	U H		K1=3.67	1992ZNa (65929)	441

By calorimetry: DH(K1)=3.73 kJ mol<sup>-1</sup>, DS(K1)=82.79 J K<sup>-1</sup> mol<sup>-1</sup>.

Dy+++	gl	KNO3	35°C	0.10M	U		K1=5.09	1990RSe (65930)	442
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C9H11NO3 H2L Tyrosine CAS 60-18-4 (4)  
2-Amino-3-(4-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KNO3	25°C	0.10M	U I		K(Dy+HL)=5.04 K(DyHL+HL)=4.57	1976SAc (66214)	443

Dy+++	gl	KNO3	25°C	0.10M	U T H		K(Dy+H2L)=4.74 K(DyH2L+H2L)=4.30	1976SAe (66215)	444
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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
-----
Dy+++      gl  diox/w 30°C  75%  U      K1=7.10      1988MKd (66504) 445
*****
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
-----
Dy+++      gl  diox/w 30°C  75%  U      K1=10.95     1988MKd (66514) 446
*****
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
-----
Dy+++      gl  KNO3   35°C  0.10M U      M      K1=4.88      1990RSc (66692) 447
                                   K(DyA+L)=4.68
                                   K(DyB+L)=4.61
                                   K(DyC+L)=4.24
H2A=Iminodiethanoic acid, H3B=NTA, H4C=EDTA
-----

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Dy+++      gl  KNO3   35°C  0.10M U      M      K1=4.32      1990RSe (66693) 448
                                   K(DyL+Ala)=9.31
                                   K(DyL+Phe)=9.07
                                   K(DyL+Trp)=9.29
*****
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
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      ISE KNO3   25°C  0.10M U      K1=12.25     1983KBd (66732) 449
Hg-electrode.
*****
C9H13NO6      H3L      (3881)
2,6-Dicarboxypiperidyl-N-ethanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  KNO3   25°C  0.10M U      K1=10.98 B2=19.11 1968TKe (66882) 450
*****
C9H13N2O9P      H3L      UMP-5      CAS 58-97-9 (2948)
Uridine-5'-monophosphoric acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  KNO3   35°C  0.10M U      M      1992RAd (66972) 451

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K(Dy+HL)=4.33  
K(DyHL+Gly)=4.52  
K(Dy+HL+His)=9.06  
K(Dy+HL+histamine)=8.49

\*\*\*\*\*

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
Dy+++	gl	KNO3	35°C	0.10M	U	M	K1=3.17 K(Dy+HA+L)=8.18 B(DyBL)=15.27 B(DyCL)=20.21	1990RSc (67051)	452

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

Dy+++	gl	KNO3	35°C	0.10M	U	M	K1=2.57 K(DyL+Ala)=5.09 K(DyL+Phe)=5.16 K(DyL+Trp)=5.43	1990RSe (67052)	453
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Dy+++	gl	KNO3	35°C	0.10M	U	M	K1=3.17 K(Dy+L+HGly)=8.41, K(Dy+L+HHis)=8.54, K(Dy+L+oxalate)=9.89	1986Rmb (67053)	454
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C9H14N4O3 HL Carnosine CAS 305-84-0 (272)  
3-Alanyl-histidine; H2N.CH2.CH2.CO.NH.CH(CH2.C3H3N2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	nmr	KCl	25°C	2.00M	U		K(Dy+H2L)=0.82	1983MAa (67316)	455

\*\*\*\*\*

C9H15N06 H3L (7177)  
2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KNO3	20°C	0.10M	U		K1=11.23 B2=19.76	1974RMg (67405)	456

\*\*\*\*\*

C9H16N2O6 H3L MEDTA CAS 40423-02-7 (5717)  
N-Methyldiaminoethane-N,N',N'-triethanoic acid; H00C.CH2.N(CH3)CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	cal	NaClO4	25°C	0.50M	M	IH	K1=13.17	1986RCa (67635)	457

DH=-11.6 kJ mol<sup>-1</sup>, DS=213 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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
Dy+++	gl	KNO3	25°C	0.10M	U		K1=4.78 B2=7.47	1968PFa (67769)	458

\*\*\*\*\*

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
Dy+++	gl	alc/w	22°C	80%	U		K1=6.31 B2=11.71 K3=5.36	1995MTa (68423)	459

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
Dy+++	gl	diox/w	25°C	50%	C T H		K1=8.22 B2=15.90 K3=6.75	1992SAa (68473)	460

At 35 C: K1=8.01, K2=6.87, K3=5.70; DH(K1)=-37.0 kJ mol<sup>-1</sup>

\*\*\*\*\*  
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
Dy+++	gl	NaClO4	25°C	0.10M	U H		K1=4.69 K(Dy+HL)=3.72	1994CRa (68511)	461

DH(K1)=27.2 kJ mol<sup>-1</sup>, SD=181 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Dy+HL)=14.1, DS=119

\*\*\*\*\*  
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
Dy+++	sp	KCl	25°C	0.10M	M I		K1=4.30	1976PEa (68574)	462

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KNO3	25°C	0.10M	U		K1=5.83 B2=11.08	1982LPc (68642)	463

\*\*\*\*\*  
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
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

Dy+++ gl NaClO4 30°C 0.10M U K1=2.62 B2=5.15 1969DNC (68703) 464  
\*\*\*\*\*

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  
-----

Dy+++ gl KCl 25°C 0.10M M K1=4.36 1979LSb (68808) 465  
\*\*\*\*\*

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

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

Dy+++ sp KCl 25°C 0.10M C K1=4.38 1973PMb (68840) 466  
\*\*\*\*\*

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

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

Dy+++ gl KCl 25°C 0.10M U I K1=3.18 1967MAi (68881) 467  
K1=4.27(I=0)  
\*\*\*\*\*

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

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

Dy+++ sp KCl 25°C 0.10M M K1=5.21 1978PPb (68941) 468  
\*\*\*\*\*

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

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

Dy+++ gl KCl 25°C 0.10M U K1=4.73 1968MAe (69004) 469  
\*\*\*\*\*

C10H7NO8S2 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  
-----

Dy+++ gl NaCl 25°C 0.10M U K1=3.389 B2=6.015 1974SAa (69049) 470  
\*\*\*\*\*

C10H7NO8S2 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  
-----

Dy+++ gl NaCl 25°C 0.10M U K1=3.589 B2=6.053 1974SAa (69059) 471  
\*\*\*\*\*

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

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

Dy+++ gl diox/w 25°C 75% U K1=5.46 B2=10.59 1986MIa (69093) 472  
\*\*\*\*\*

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  
-----

Dy+++ gl alc/w 22°C 80% U K1=7.26 B2=12.91 1995MTa (69140) 473  
K3=5.84

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  
-----

Dy+++ sp non-aq 25°C 100% C T K1=2.99 2005SYa (69546) 474  
In ethylacetate; At 50 C K1=2.42

-----  
Dy+++ gl KNO3 25°C 0.10M U TIH K1=4.33 B2=7.32 1986NSa (69547) 475  
B(DyAL)=11.57

H2A=phthalic acid. DH(DyAL)=-53.3 kJ mol<sup>-1</sup>, DS=42.8 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Dy+++ gl NaNO3 25°C 0.50M U K1=0.9 1979HJa (69548) 476  
\*\*\*\*\*

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

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

Dy+++ gl diox/w 25°C 75% U K1=5.80 B2=11.20 1986MIa (69727) 477  
\*\*\*\*\*

C10H8O2 H2L CAS 92-44-4 (1658)  
2,3-Dihydroxynaphthalene;

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

Dy+++ gl NaClO4 20°C 0.10M U M 1973PAc (69766) 478  
K(DyA+L)=7.80, H4A=EDTA

\*\*\*\*\*

C10H8O5S H3L DHNSA (877)  
2,3-Dihydroxynaphthalene-6-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.50M	C		K1=10.25 B2=18.29 B(DyHL2)=25.17	1976LAd (69839)	479
*****									
C10H8O8S2 H4L Chromotropic ac CAS 148-25-4 (1875) 1,8-Dihydroxynaphthalene-3,6-disulfonic acid;									
-----									
Dy+++	gl	KCl	25°C	0.10M	M I		K(Dy+HL)=2.35	1974MLa (69941)	480
*****									
C10H9NO4S H2L CAS 29021-67-8 (3926) 2-Methyl-8-hydroxyquinoline-5-sulfonic acid;									
-----									
Dy+++	gl	NaClO4	30°C	0.10M	U TI		K1=5.57 B2=10.70 B3=14.69	1988BCd (70196)	481
in 42.5% MeOH-water: K1=6.48, B2=12.48, B3=17.16 51.8% EtOH-water: K1=6.91, B2=13.16, B3=18.01									
*****									
C10H9N3OS HL CAS 1823-44-5 (4780) 2-(2'-Thiazolylazo)-4-methylphenol; CH3.C6H3(OH).N:N.C3H3NS									
-----									
Dy+++	sp	alc/w	25°C	100%	U		K1eff=4.21	1989OKb (70345)	482
At pH 3.4 by competition with 18-crown-6. Medium: MeOH, 0.03 M Et4NC1O4									
*****									
C10H9N3OS HL CAS 60321-26-8 (4671) 2-(2-Thiazolylazo)methylphenol; C3H2NS.N:N.C6H3(CH3)OH									
-----									
Dy+++	sp	diox/w	25°C	10%	U		K1=9.71 B2=18.40	1973KSd (70357)	483
Medium: 10% dioxan, 0.1 M KNO3									
*****									
C10H9N3O2S HL CAS 3012-52-0 (217) 2-(2'-Thiazolylazo)-4-methoxyphenol; CH3O.C6H3(OH).N:N.C3H2N2									
-----									
Dy+++	sp	KNO3	25°C	0.10M	U		K1=9.39	1974KSa (70396)	484
*****									
C10H10OS 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
Dy+++	gl	mixed	30°C	75%	U		K1=4.0 K3=3.28	1969DNb (70633)	485

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
Dy+++	gl	alc/w	25°C	80%	U		K1=8.36 K3=4.45	1967DZa (70717)	486

Medium: 80% MeOH, 0.1 M NaCl

Dy+++	gl	alc/w	24°C	80%	U		K1=8.36 K3 = 4.43	1967DZb (70718)	487
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Medium: 80% v/v MeOH/H2O, 0.1 M NaCl

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	M		K1=4.26	1977HCb (70847)	488

\*\*\*\*\*

C10H11NO5 L (2831)  
Acetothioacetanilide; CH3.CO.CH2.CS.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	25°C	50%	U		K1=5.47 B2=10.42	1986NBa (70879)	489

\*\*\*\*\*

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
Dy+++	gl	diox/w	25°C	50%	U		K1=6.05	1986NBa (70908)	490

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	50%	C	TIH	K1=5.66 B2= 9.95	1986SGc (71089)	491

Medium: 50% v/v dioxan/H2O, 0.10 M NaClO4. Data for 0.02-0.20 M NaClO4  
and 30-50 C. DH(K1)=69.9 kJ mol<sup>-1</sup>, DS=339 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=79.5, DS=344

\*\*\*\*\*

C10H12N2O4 H2L CAS 16598-05-3 (967)

2-Pyridylmethyliminodiethanoic acid; C<sub>5</sub>H<sub>4</sub>N.CH<sub>2</sub>.N(CH<sub>2</sub>.COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	KNO <sub>3</sub>	25°C	0.10M	U			K <sub>1</sub> =9.00 B <sub>2</sub> =17.03	1964THa (71255)	492
*****										
C10H12N4O5		HL		Inosine				CAS 58-63-9	(2344)	
Hypoxanthine-9-beta-D-ribofuranoside;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	KNO <sub>3</sub>	35°C	0.10M	U	M		K <sub>1</sub> =4.52 B(Dy(gly)L)=10.58 B(Dy(his)L)=11.02	1987RRc (71385)	493

\*\*\*\*\*

C10H12N4O6		H <sub>2</sub> L		Xanthosine				CAS 5968-90-1	(1176)	
3,9-Dihydro-9-ribofuranosyl-1H-purine-2,6-dione;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	KNO <sub>3</sub>	35°C	0.10M	U	M		K(Dy+HA+HL)=5.42 K(Dy+HB+HL)=6.07 K(Dy+HL)=4.58	1987RRc (71485)	494

HA=glycine, HB=histidine.

\*\*\*\*\*

C10H12O <sub>2</sub>		HL						CAS 1946-74-3	(202)	
3-Isopropyltropolone;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	50%	U	M		K <sub>1</sub> =7.90 B <sub>2</sub> =15.48 K <sub>3</sub> =6.08 K(Dy(NTA)+L)=6.57	1980SGa (71575)	495

Dy+++	gl	alc/w	24°C	80%	U			K <sub>1</sub> =9.2 B <sub>2</sub> =16.90 K <sub>3</sub> =6.4 K <sub>4</sub> =5.0	1968DZb (71576)	496
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Medium: 80% MeOH, 0.1 M NaCl

Dy+++	sp	alc/w	?	3%	U			K <sub>1</sub> =7.33	1967GDb (71577)	497
-------	----	-------	---	----	---	--	--	----------------------	-----------------	-----

Medium: 3% EtOH, 0.2 M NaClO<sub>4</sub>

\*\*\*\*\*

C10H12O <sub>4</sub>		HL						CAS 5936-18-9	(2743)	
2-Hydroxy-3,4-dimethoxyacetophenone; (HO)(CH <sub>3</sub> ) <sub>2</sub> C <sub>6</sub> H <sub>2</sub> .CO.CH <sub>3</sub>										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	diox/w	15°C	50%	C T H			K <sub>1</sub> =9.56 B <sub>2</sub> =16.84	1987GBa (71651)	498
K <sub>1</sub> (35, 40, 50 C) = 8.02, 8.00, 7.79 respectively. DH(K <sub>1</sub> )=-95.60 kJ mol <sup>-1</sup>										

\*\*\*\*\*

C10H12O5 HL CAS 490-64-2 (8492)  
2,4,5-Trimethoxybenzoic acid;

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

Dy+++ gl diox/w 25°C 76% M K1=7.72 1978PMa (71671) 499  
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

\*\*\*\*\*

C10H12O5 HL CAS 570-02-5 (8493)  
2,4,6-Trimethoxybenzoic acid;

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

Dy+++ gl diox/w 25°C 76% M K1=7.14 1978PMa (71678) 500  
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

\*\*\*\*\*

C10H14N5O7P H2L AMP-5 CAS 18422-05-4 (842)  
Adenosine-5'-monophosphoric acid, 5-Adenylic acid;

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

Dy+++ gl R4N.X 25°C 0.10M C T K1=4.70 1991SMa (72450) 501  
K(Dy+HL)=2.71

IUPAC evaluation

\*\*\*\*\*

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  
-----

Dy+++ gl KCl 25°C 0.10M U K1=13.04 1980MMe (73118) 502  
K(Dy+HL)=6.67

-----  
Dy+++ gl KNO3 20°C 0.10M U K1=13.75 1975DPa (73119) 503  
-----

Dy+++ gl NaClO4 30°C 0.10M U 1974STb (73120) 504  
K(Dy+H2L=DyL+2H)=9.35

-----  
Dy+++ vlt KNO3 25°C 0.10M U K1=13.59 1971BGb (73121) 505  
-----

\*\*\*\*\*

C10H16N2O8 H4L EDTA CAS 60-00-4 (120)  
1,2-Diaminoethane-N,N',N'-tetraethanoic acid, Sequestic acid;

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

Dy+++ cal NaClO4 25°C 0.10M C H 1987YJa (73687) 506  
DH(K1)=-4.40 kJ mol<sup>-1</sup>, DS(K1)=326 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Dy+++ gl KCl 25°C 1.0M U 1984BKc (73688) 507

$$K(\text{DyL}+\text{H})=0.70$$

Dy+++ gl NaCl04 20°C 0.02M U M 1982MPd (73689) 508  
 $K(\text{DyL}+\text{P04})=3.54$

Dy+++ vlt KNO3 20°C 0.10M U K1=18.46 1978NLb (73690) 509

Dy+++ gl NaCl04 25°C 0.50M U K1=16.79 1977GGb (73691) 510

Dy+++ gl KCl 25°C 1.00M U K2=3.13 1976BKa (73692) 511  
 $K(\text{DyL}+\text{HL})=2.00$   
 $K(2\text{DyL}+\text{L})=5.43$

Dy+++ gl KCl 25°C 1.0M U 1976GMb (73693) 512  
 $K(\text{DyL}+\text{H})=1.44$

Dy+++ sp KCl 25°C 0.10M U K2=3.13 1975BKa (73694) 513  
 $K(2\text{DyL}+\text{L})=5.43$   
 $K(\text{DyL}+\text{HL})=2.00$

Dy+++ EMF KCl 25°C 0.10M U T 1974BKb (73695) 514  
 $K(\text{DyL}+\text{H})=1.1$

Dy+++ gl KCl 25°C 1.0M C K2=3.13 1974BKe (73696) 515  
 $K(\text{DyL}+\text{HL})=2.00$   
 $K(2\text{DyL}+\text{L}=\text{Dy2L3})=5.43$

Dy+++ gl KNO3 25°C 0.10M U T M 1973TRb (73697) 516  
 $K(\text{DyL}+\text{HA})=4.18$   
 $K(\text{DyL}+\text{A})=5.71$   
 $K(\text{DyL}+\text{A})=5.70$

Also at 2, 35, 45 C. H5A=tripolyphosphoric acid.  $K(\text{DyL}+\text{B})=5.7$   
H4B=ATP.  $K(2\text{ C})=5.8$ ,  $K(35\text{ C})=5.5$ ,  $K(45\text{ C})=5.4$

Dy+++ gl NaCl04 25°C 0.10M U M 1969AIb (73698) 517  
 $K(\text{DyL}+\text{A})=7.31$ , H4A=tiron

Dy+++ dis oth/un 25°C ? U K1=17.50 1969PJa (73699) 518  
Method: paper electrophoresis, Medium: pH=1.86

Dy+++ ix KCl 25°C 0.10M U H K1=17.78 1959BDb (73700) 519  
DH(K1)=6.3 kJ mol<sup>-1</sup>, DS=361 J K<sup>-1</sup> mol<sup>-1</sup>

Dy+++ gl oth/un 20°C 0.10M U K1=18.17 1955WSa (73701) 520

Dy+++ gl KCl 20°C 0.10M U I T K1=18.00 1954SGa (73702) 521  
By polarography: K1=18.18. In 0.1 M KNO3, K1=18.30

Dy+++ gl KCl 20°C 0.10M U T K1=17.57 1953WSa (73703) 522  
By polarography K1=17.75



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-----
Dy+++      gl  KCl      20°C 0.10M U      K1=17.75      1952VIa (73704) 523
*****
C10H16N5O13P3      H4L      ATP      CAS 56-65-5 (403)
Adenosine-5'-triphosphoric acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  NaCl04  20°C 0.20M U T H      K1=7.43      B2=11.53      1993VLa (74713) 524
                                           K(Dy(nta)+L)=4.67
                                           K(Dy(edta)+L)=4.27

```

Data for 30, 40 C. DH(K1)=17.2 kJ mol<sup>-1</sup>, DS(K1)=201 J K<sup>-1</sup> mol<sup>-1</sup>. DH(K2)=18.2, DS(K2)=141; DH(Dy(nta)+L)=20.1, DS=158; DH(Dy(edta)+L)=21.1, DS=154.

```

-----
Dy+++      gl  R4N.X   25°C 0.10M C      T K1=6.72      1991SMa (74714) 525
                                           K(Dy+HL)=3.66

```

IUPAC evaluation

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-----
Dy+++      gl  KCl      25°C 0.10M U      K1=6.44      B2=10.33      1988SSd (74715) 526
                                           K(Dy+HL)=4.16
-----

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```

Dy+++      kin oth/un 25°C 0.05M C      K1=7.31      1983MCc (74716) 527
Method: inhibition of the hexokinase reaction, pH 8.0 (0.05 M TAPS).
-----

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```

Dy+++      gl  KNO3    35°C 0.10M U      M      1972TRc (74717) 528
                                           K(Dy(EDTA)+L)=5.5

```

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*****
C10H16O2      HL      CAS 100563-25-5 (4706)
2-Butanoylcyclohexanone; CH3.CH2.CH2.CO.C6H9O
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  oth/un 30°C 0.10M U      K1=9.88      B2=18.90      1972DSe (74918) 529
                                           K3=8.63

```

```

*****
C10H17N3O6S      H3L      Glutathione      CAS 70-18-8 (333)
Glutamyl-cysteinyl-glycine;
-----

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

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```

Dy+++      gl  NaCl04  25°C 0.10M U TIH      K1=7.498      2003GSb (75117) 530
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=8.520. DH(K1)=-34.3 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
-----

```

```

Dy+++      gl  NaCl04  25°C 0.50M U      K1=14.79      1977GGB (75353) 531

```



```

-----
Dy+++      ISE non-aq 25°C 100% C      K1=5.66      1983ANb (75997) 542
The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4
*****
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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```

-----
Dy+++      ISE non-aq 25°C 100% C      K1=3.75      1986BDa (76445) 543
Medium: propylene carbonate, 0.1 M Et4NClO4
*****
C11H8O3          L      CAS 1133-72-8 (2614)
2-Aceto-1,3-indandione;
-----

```

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

```

-----
Dy+++      gl  diox/w 30°C 75% U T      K1=4.02      B2=7.87      1984APa (77027) 544
-----
Dy+++      gl  mixed 22°C 60% U      K1=3.97      B2=7.56      1979JMa (77028) 545
K3=3.21
-----

```

Medium: 60% acetone/H2O

```

*****
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
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

```

-----
Dy+++      gl  diox/w 20°C 50% U T      K1=8.08      B2=16.55     1977SKf (77120) 546
B3=24.67
K3=8.12
-----

```

```

*****
C11H8O4          HL      CAS 7555-37-5 (4812)
3-Acetyl-4-hydroxycoumarin
-----

```

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

```

-----
Dy+++      gl  diox/w 35°C 50% U      K1=3.98      B2=7.02      1971MAa (77172) 547
Medium: 50% dioxan, 0.01 M NaClO4
-----

```

```

*****
C11H8O4          HL      CAS 6724-42-1 (6183)
8-Formyl-7-hydroxy-4-methyl-2H-1-benzopyran-2-one; CH0.C9H30(:O)(CH3)(OH)
-----

```

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

```

-----
Dy+++      gl  diox/w 30°C 50% U TI M  K1=5.33      B2=9.26      1985ECa (77198) 548
K3=2.91
-----

```

20 C: K1=5.67, K2=4.21, K3=3.13; 40C: K1=5.01, K2=3.67, K3=2.69

```

*****
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
Dy+++	gl	NaCl04	25°C	0.10M	C		K1=8.87 B2=15.15 K(Dy+HL)=2.19	1979LAb (77222)	549

\*\*\*\*\*

C11H8O6S H3L CAS 15509-36-1 (2658)

3-Hydroxy-7-sulfo-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaCl04	25°C	0.10M	C		K1=7.68 K(Dy+HL)=2.32	1976MLb (77249)	550

\*\*\*\*\*

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
Dy+++	cal	NaCl04	25°C	0.10M	C	H	K1=8.95 B2=14.7 K(Dy+HL)=1.89	1986LLc (77276)	551

DH(Dy+HL)=6.7 kJ mol<sup>-1</sup>, DS=59 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C11H9NO2 H2L CAS 7470-09-9 (8481)

2-Hydroxy-1-naphthaldoxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	25°C	75%	U		K1=8.89 B2=16.45	1978MCd (77315)	552

Medium: 75% v/v dioxane/H2O, 0.10 M NaCl04.

\*\*\*\*\*

C11H9NO4 H2L CAS 4321-82-7 (4829)

3-Acetyl-4-hydroxycoumarin oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	35°C	50%	U		K(Dy+HL)=3.73 K(Dy+2HL)=6.61	1971MAa (77415)	553

Medium: 50% dioxan, 0.01 M NaCl04

\*\*\*\*\*

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
Dy+++	sp	NaNO3	25°C	0.10M	C		K1=10.36 K(Dy+HL)=4.29 *K(DyHL)=-6.23	19840Ha (77532)	554

Medium pH 4.8-6.3.

Dy+++ sp KCl 20°C 0.10M U 1971EKa (77533) 555  
K(Dy+HL)=3.48

Dy+++ sp NaClO4 20°C 0.10M U K1=10.6 1967SNb (77534) 556  
K(Dy+HL)=11.2

\*\*\*\*\*  
C11H10N4O3 HL CAS 92265-24-2 (6211)  
5-(2'-Methylphenylazo)barbituric acid;

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

Dy+++ gl diox/w 25°C 75% U K1=5.60 B2=10.65 1986MIa (77726) 557  
\*\*\*\*\*

C11H10N4O4 HL CAS 92265-26-4 (6210)  
5-(2'-Methoxyphenylazo)barbituric acid;

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

Dy+++ gl diox/w 25°C 75% U K1=5.87 B2=11.25 1986MIa (77740) 558  
\*\*\*\*\*

C11H12N2O2 HL CAS 103314-23-4 (6182)  
2-(N-2-Pyrrolidimino)benzoic acid; C4H7N:N.C6H4.COOH

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

Dy+++ gl NaClO4 25°C 0.10M U TIH B2=13.92 1986GSb (78016) 559  
35 C: B2=14.05; 45 C: B2=14.17. DH(B2)=-22.9 kJ mol<sup>-1</sup>, DS=195 J K<sup>-1</sup> mol<sup>-1</sup>  
\*\*\*\*\*

C11H12N2O2 HL Tryptophan CAS 73-22-3 (3)  
2-Amino-3-(3-indolyl)propanoic acid; H2N.CH(CH2.C8H6N)COOH

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

Dy+++ gl KNO3 35°C 0.10M U K1=5.33 1990RSe (78195) 560

Dy+++ gl KCl 25°C 0.10M U T H K1=4.83 1976BFc (78196) 561  
For 55C K1= 4.32

\*\*\*\*\*  
C11H12N2O5S HL CAS 56475-09-3 (8410)  
3-(4'-Sulfophenylhydrazo)-pentane-2,4-dione;

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

Dy+++ gl oth/un 30°C 0.10M U B2=22.04 1985EEb (78316) 562  
Medium: not stated. For 3'-sulfophenylhydrazo-, B2=22.12; for 2'-sulfo-  
phenylhydrazo-, B2=24.26; for 4'-methyl-2'-sulfophenylhydrazo-, B2=23.42.

\*\*\*\*\*  
C11H12O3 HL CAS 94-02-0 (3351)

Ethyl benzoylacetate; C6H5.CO.CH2.CO2.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	mixed	25°C	75%	U		K1=8.62 B2=15.82	1971DRa (78397)	563
Medium: 75% acetone, 0.1 M NaClO4									

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	EMF	NaClO4	25°C	0.10M	U		K1=19.70	1982MSc (78590)	564
*****									
C11H13NO5	H3L	HBIDA					CAS 7372-13-6 (1603)		
N-(2-Hydroxybenzyl)iminodiethanoic acid; HO.C6H4.CH2.N(CH2.CO.OH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KNO3	25°C	0.10M	C		K1=14.07 B2=25.18	1989YSa (78618)	565
							K(Dy+HL)=5.91		
							K(Dy+2HL)=12.51		

Dy+++	gl	KNO3	20°C	0.10M	U		K1=14.25 B2=25.08	1983MSc (78619)	566
*****									
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
Dy+++	gl	KNO3	25°C	0.10M	U		K1=7.23 B2=12.15	1964THa (78879)	567
*****									
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
Dy+++	vlt	KNO3	20°C	0.10M	U		K1=14.77	1981NSc (79273)	568
Dy+++	EMF	KNO3	25°C	0.10M	U		K1=16.27	1980KBc (79274)	569
Dy+++	vlt	KNO3	20°C	0.10M	U		K1=19.08	1978NLb (79275)	570
Dy+++	vlt	KNO3	20°C	0.10M	U		K1=19.05	1964ICb (79276)	571
*****									
C11H18N2O8	H4L						CAS 38539-29-0 (2573)		
1,3-Diaminopropane-N,N'-di(1,4-butanedioic acid)									

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

Dy+++ gl KNO3 25°C 0.10M U K1=10.55 1976GKd (79360) 572  
\*\*\*\*\*

C11H18N2O8 H4L CAS 4408-81-5 (923)  
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOCH<sub>2</sub>)<sub>2</sub>NCH<sub>2</sub>)<sub>2</sub>CH<sub>2</sub>

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

Dy+++ gl KNO3 20°C 0.10M U K1=14.72 1964LAa (79434) 573  
Also K1=14.67. By polarography: K1=14.60

\*\*\*\*\*

C11H18N2O9 H4L HDPTA CAS 3148-72-9 (431)  
1,3-Diamino-2-hydroxypropane-N,N,N',N'-tetraethanoic acid;

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

Dy+++ gl KNO3 25°C 0.10M M K1=14.83 1986PLc (79548) 574

\*\*\*\*\*

C11H18N2O9 H4L CAS 668-21-1 (2562)  
2-Hydroxy-1,3-diaminopropane-N,N'-di(1,4-butanedioic) acid

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

Dy+++ gl KNO3 25°C 0.10M U K1=11.99 1976GKd (79592) 575

\*\*\*\*\*

C11H18O2 HL CAS 40072-58-3 (4820)  
2-(3'-Methylbutanoyl)cyclohexanone (2-isovaleryl cyclohexanone);

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

Dy+++ gl mixed 30°C 75% U K1=9.43 B2=18.44 1972DSd (79650) 576  
K3=8.30

Medium: 75% acetone

\*\*\*\*\*

C11H18O2 HL CAS 5601-52-5 (4821)  
2-Butanoyl-6-methylcyclohexanone (2-butyryl-6-methylcyclohexanone);

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

Dy+++ gl mixed 30°C 75% U K1=10.62 B2=20.69 1972DSd (79661) 577

Medium: 75% acetone

\*\*\*\*\*

C11H20O4 H2L CAS 2283-16-1 (2854)  
2,2-Dibutylpropanedioic acid; HOOCC(C<sub>4</sub>H<sub>9</sub>)<sub>2</sub>COOH

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

Dy+++ gl KNO3 25°C 0.10M U K1=4.75 B2=7.43 1968PFa (79765) 578

\*\*\*\*\*

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
-----
Dy+++      gl  NaClO4 25°C 0.10M C                        2001GYb (79953) 579
                                         K(2Dy+20H+2L)=23.86
                                         K(2Dy+40H+2L)=38.12
                                         K(2Dy+60H+2L)=48.73

```

```

*****
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
-----
Dy+++      gl  alc/w 22°C 80% U      K1=6.28  B2=11.70  1995MTa (80180) 580
                                         K3=5.08

```

```

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
-----
Dy+++      sp  non-aq 25°C 100% C  H      K1=1.85      2002KNc (80422) 581
Medium: N,N-dimethylformamide, 0.20 M Et4NClO4.
By calorimetry: DH(K1)=-6.8 kJ mol-1.
-----

```

```

Dy+++      dis non-aq 25°C 100% C  HM      1998YHa (80423) 582
                                         K(DyA3+L)=7.85
Method: solvent extraction from 0.10 M NaClO4 into CHCl3. HA is
1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedione. DH(DyA3+L)=3.3 kJ mol-1

```

```

*****
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
-----
Dy+++      gl  NaClO4 30°C 0.10M U T H      B2=13.74      1982GMb (80780) 583
                                         B3=19.11

```

```

Data for 40 and 50 C. Also DH and DS values.
*****
C12H11N3O5      HL                        (6787)
2-Hydroxy-1-naphthaldehyde thiosemicarbazone;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  diox/w 20°C 75% U I      K1=7.90  B2=14.99  1992SSc (80887) 584
Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4

```

```

*****
C12H11N3O2      HL      CAS 50536-09-5 (6323)
2-Hydroxy-1-naphthaldehyde-semicarbazone; HO.C10H6.CH:N.NH.CO.NH2

```



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	20°C	75%	U	I	K1=9.552 B2=17.344	1992SSc (80915)	585
Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4									
*****									
C12H12NO3Cl		HL					(1055)		
2-Chloro-4-dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H3Cl.CH:CH.CO.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	sp	NaClO4	25°C	0.50M	U		K1=2.024	1987MSa (80963)	586
*****									
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
Dy+++	gl	alc/w	22°C	0.1M	U		K1=6.53 B2=12.24 K3=4.55	2000TBb (81069)	587
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
Dy+++	sp	NaClO4	25°C	0.50M	U		K1=2.185	1987MSa (81193)	588
*****									
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
Dy+++	dis	R4N.X	25°C	0.12M	C		K1=1.77	1998SUa (81694)	589
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
Dy+++	gl	KNO3	25°C	0.10M	C		K1=5.85	1988YSa (81807)	590
*****									
C12H18N2O8		H2L					CAS 93031-52-8 (5829)		
1,4-Dioxa-7,10-diazayclododecane-5,12-dione-7,10-diethanoic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

Dy+++      gl   R4N.X   25°C 0.10M C      K1=6.40      1988CCb (81833) 591  
 \*\*\*\*\*  
 C12H18N2O8      H4L      CAS 76079-31-7 (2587)  
 trans-1,2-Diaminocyclohexane-N,N'-di(propanedioic acid)

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++      EMF   KNO3   25°C 0.10M U      K1=14.04      1985SGa (81858) 592

Dy+++      EMF   KNO3   25°C 0.10M U      K1=15.59      1980SGB (81859) 593  
 \*\*\*\*\*  
 C12H20N2O8      H4L      CAS 1798-13-6 (4935)  
 1,2-Diaminobutane-N,N,N',N'-tetraethanoic acid;  
 (HOOC.CH2)2N.CH2.CH(C2H5).N(CH2.COOH)2

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

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Dy+++      vlt   KNO3   20°C 0.10M U      K1=19.48      1968NLa (82022) 594  
 \*\*\*\*\*

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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---

Dy+++      gl   KNO3   20°C 0.10M U      K1=9.06      B2=13.56      1975DPa (82062) 595

Dy+++      gl   NaClO4   30°C 0.10M U      1974STb (82063) 596  
 K(Dy+H2L=DyL+2H)=13.8

---

Dy+++      gl   KNO3   25°C 0.10M U      K1=8.80      1973GBd (82064) 597  
 \*\*\*\*\*

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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---

Dy+++      vlt   KNO3   20°C 0.10M U      K1=17.98      1976NKa (82129) 598  
 \*\*\*\*\*

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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---

Dy+++      gl   NaClO4   25°C 0.10M U    IH      K1=13.76      1988RNa (82160) 599  
 B(Dy+HL)=6.32

DH(K1)=1.19 kJ mol<sup>-1</sup>, DH(Dy+HL)=31.0, DS(K1)=267 J K<sup>-1</sup> mol<sup>-1</sup>

---

Dy+++      vlt   R4N.X   30°C 0.01M C      K1=15.80      1981GMh (82161) 600  
 Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.  
 \*\*\*\*\*

C12H20N2O8 H4L CAS 2458-58-4 (922)  
 1,4-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.(CH2)4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++	gl	NaClO4	25°C	0.50M	M	H	K1=10.55 K(DyL+H)=6.40 K(DyHL+H)=5.16	1985CBa (82215)	601
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DH(K1)=28.4 kJ mol<sup>-1</sup>, DS=297 J K<sup>-1</sup> mol<sup>-1</sup> (by calorimetry)

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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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Dy+++	sp	NaClO4	20°C	0.10M	U		K1=19.83	1971ISa (82290)	602
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Dy+++	vlt	oth/un	20°C	0.10M	U		K1=19.93	1966DMa (82291)	603
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Dy+++	vlt	KNO3	20°C	0.10M	U		K1=19.93	1966NSb (82292)	604
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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
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Dy+++	sp	NaClO4	20°C	0.10M	U		K1=17.16	1971ISa (82388)	605
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Dy+++	vlt	oth/un	20°C	0.10M	U		K1=17.01	1966DMa (82389)	606
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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
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

Dy+++	gl	KNO3	25°C	0.10M	C		K1=14.83	1985TPa (82450)	607
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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
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Dy+++	EMF	KNO3	20°C	0.10M	U		K1=18.21	1962MMc (82527)	608
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C12H20N2O10 H4L CAS 10258-50-1 (3993)

(2,3-Dihydroxytetramethylenedinitrilo)tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Dy+++ oth oth/un ? ? U 1967Lda (82585) 609  
B(Dy2L)=27.23

Method: high-frequency titration

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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

Dy+++ vlt KNO3 20°C 0.10M C K1=17.28 1978NL a (82671) 610

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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

Dy+++ gl alc/w 20°C 40% U K1=11.34 1985LBc (82694) 611  
Medium: 40% v/v MeOH/H2O, 0.1 M KNO3

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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

Dy+++ gl R4N.X 25°C 0.10M C K1=13.13 1998CCb (83080) 612

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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

Dy+++ dis R4N.X 25°C 0.12M C K1=<0.2 1998SUa (83343) 613  
Medium: 0.12 M Et4NBr.

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

Dy+++ dis non-aq 25°C 100% U B2=8.06 1990NIa (83344) 614

B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate

Dy+++ sp alc/w 25°C 100% U 1989OKb (83345) 615

K1eff=2.17

At pH 3.4 by competition with 18-crown-6. Medium: MeOH, 0.03 M Et4NClO4

Dy+++ ISE non-aq 25°C 100% C K1=7.90 1983ANb (83346) 616

The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4

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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
Dy+++	ISE	non-aq	25°C	100%	C		K1=16.9	1986ALa (83831)	617
Medium: propylene carbonate, 0.1 M Et4NClO4									
Dy+++	gl	alc/w	25°C	100%	C I		K1=8.96	1983ANb (83832)	618
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4									
In propylene carbonate, 0.1 M Et4NClO4, K1=15.1.									
*****									
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
Dy+++	gl	R4N.X	25°C	0.10M	U		K1=12.48 K(Dy+HL)=9.64 K(Dy+H2L)=5.53	1996BJa (84153)	619

Medium: 0.1 M Me4NCl

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C12H30N6		L					CAS 296-35-5 (143)		
1,4,7,10,13,16-Hexaazacyclooctadecane; cyclo(-(NH.CH2.CH2)6-)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaCl	20°C	0.10M	C		K1=10.1	1988SJb (84325)	620
*****									
C13H502F13S		L					(6997)		
1-(2-Thienyl)-3-tridecafluorohexylpropane-1,3-dione; C6F13.CO.CH2.CO.C4H3S									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	alc/w	22°C	80%	U		K1=5.61 B2=11.08 K3=4.53	1995MTa (84451)	621

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

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C13H9F02S		HL					CAS 43191-66-8 (6154)		
1-(2'-Thienyl)-3"-fluoro-2"-hydroxyphenyl)-prop-1-one-2-ene; C4H3S.CH:CH.CO.C6H3(OH)F									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	30°C	0.10M	U		K1=5.00	1989SHa (84513)	622
*****									
C13H9N3OS		L					(6217)		
Acenaphthenequinone Monothiosemicarbazone; C12H6O:N.NH.CS.NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	25°C	75%	U TI		K1=9.15 B2=17.66	1986SSd (84620)	623
Medium: 0.1 M NaClO4. 30 C: K1=9.37, K2=8.70; 40 C: K1=9.11, K2=8.58; 50 C:									

K1=8.81,K2=8.08; I=0.01 M: K1=10.04,K2=9.46; I=0.05: K1=9.58,K2=9.07

\*\*\*\*\*

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
Dy+++	gl	alc/w	25°C	70%	U		K1=11.12 B2=22.15	1995IFa (85041)	624
Medium: 70% v/v EtOH/H2O, 0.10 M NaCl.									

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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
Dy+++	dis	oth/un	23°C	0.01M	C			1997AAa (85141)	625
Method: extraction of 165Dy from 0.01 M borate buffer into benzene-ligand solution. K(Dy+3HL(org)=DyL3(org)+3H)=-15.40.									

Dy+++	gl	mixed	25°C	75%	U		K1=8.60 B2=15.10 K3=5.50	1969DSb (85142)	626
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Medium: 75% dioxan, 0.1 M NaClO4

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C13H11NS HL CAS 42152-36-3 (8401)

2-[(Phenylmethylene)amino]benzenethiol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	alc/w	25°C	70%	U		K1=8.36 B2=15.69	1995IFa (85226)	627
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.									

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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
Dy+++	gl	diox/w	30°C	75%	U		K1=8.85 B2=16.41	1988ESb (85242)	628

\*\*\*\*\*

C13H12N2O3S HL (6203)

Salicylidenesulfanilamide, 4-(N-(2-Hydroxybenzylene))aminosulanilamide;

H2NSO2C6H4N:CHC6H4OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	oth/un	25°C	0.10M	U		K1=12.800	1987KSc (85356)	629

\*\*\*\*\*

C13H12N4O L Diphenylcarbaz. CAS 538-62-5 (1195)

Diphenylcarbazone; C6H5.NH.NH.CO.N:N.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	EMF	alc/w	20°C	50%	U			K1=3.65	1971MAc (85408)	630
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Medium: 50% EtOH, 0.1 M NaClO4

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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
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Dy+++	EMF	alc/w	20°C	50%	U			K1=2.05	1971MAc (85454)	631
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Medium: 50% EtOH, 0.1 M NaClO4

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C13H14N2O3 HL (4940)

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

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

Dy+++	gl	diox/w	30°C	75%	U			K1=11.10 B2=21.08	1988ESb (85605)	632
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C13H19NO3 H2L (2031)

2-(1-(2-Hydroxyphenyl)-ethylimine)-3-methylbutanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	gl	NaClO4	25°C	0.10M	U	TIH		K1=12.25 B2=22.45	1980SSc (86053)	633
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C13H20N2O8 H4L CAS 123064-92-6 (7929)

trans-1,3-Cyclopentanediiminotetraethanoic acid;

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

Dy+++	gl	KCl	25°C	1.0M	U			K1=13.56	1989CMB (86118)	634
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K(DyHL+H)=3.33

K(DyL+H)=4.05

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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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Dy+++	gl	KNO3	25°C	0.10M	C			K1=10.75	1982PPd (86191)	635
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K(Dy+HL)=6.98

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C13H22N2O8 H4L CAS 1198-14-7 (5004)

1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCH2)2NCH2CH(C3H7)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++ vlt KNO3 20°C 0.10M U K1=19.48 1974NL a (86224) 636  
\*\*\*\*\*

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  
-----

Dy+++ vlt KNO3 20°C 0.10M U K1=12.88 1981NSc (86251) 637  
\*\*\*\*\*

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  
-----

Dy+++ vlt KNO3 20°C 0.10M U K1=19.39 1968NL b (86279) 638  
\*\*\*\*\*

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  
-----

Dy+++ gl KNO3 25°C 0.10M C K1=15.11 1985PL a (86300) 639  
K(Dy+HL)=9.31  
\*\*\*\*\*

C14H8O4 H2L Alizarin CAS 72-48-0 (1058)

1,2-Dihydroxyanthraquinone;

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

Dy+++ gl oth/un 25°C 0.10M U K1=12.33 1981EI a (86639) 640  
\*\*\*\*\*

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  
-----

Dy+++ gl NaClO4 25°C 0.20M U M K1=10.37 1987VS a (86724) 641  
K(Dy(cdta)+L)=6.80, K(Dy(dtpa)+L)=5.32.

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Dy+++ sp mixed ? 50% U 1973KT b (86725) 642

K1eff=7.05

B3eff=17.50

Medium: 50% v/v acetone. Borax buffers.

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C14H10N2O2F HL CAS 87221-43-0 (6155)

1-(2'-Pyridyl)-3-(3-fluoro-2-hydroxyphenyl)-prop-1-ene-2-ene;

C5H4N.CH:CH.CO.C6H3(OH)F



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	30°C	0.10M	U		K1=5.20	1989SHa (86883)	643
*****									
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
Dy+++	gl	diox/w	25°C	50%	U		K1=7.06 B2=13.94	19820Ca (86993)	644
*****									
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
Dy+++	gl	diox/w	25°C	50%	U I		K1=3.84 B2=7.63	1985ANa (87212)	645
*****									
C14H13N2O2		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
Dy+++	gl	alc/w	30°C	50%	U T H		K1=7.12	1981RSb (87403)	646
Medium: 50% v/v EtOH, 0.1 M KNO3. K1=8.17(I=0), 7.48(I=0.05)									
*****									
C14H13N2O4S		H2L					(3660)		
2-Aminobenzenesulfonic acid 2-hydroxyacetophenone Schiff base;									
HSO3.C6H4.N:C(CH3).C6H4.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	U T H		K1=6.78 B2=11.74	1978GKb (87574)	647
Data for 25-35 C and I=0.01-0.10 M. At I=0.0 M, DH(K1)=38.7 kJ mol <sup>-1</sup> , DS(K1)=350 J K <sup>-1</sup> mol <sup>-1</sup> .									
*****									
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
Dy+++	gl	diox/w	30°C	75%	U		K1=8.93	1988MKd (87655)	648
*****									
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
Dy+++	gl	mixed	30°C	0.10M	U T H		K1=12.06 B2=22.33	1988TRb (87716)	649
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water									

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C14H16N2O2S                      HL                      CAS 189231-67-2 (8475)  
2-Thiophenylhydrazodimedone;

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Dy+++            gl    diox/w 25°C 75% C T H            K1=13.49 B2=25.32 1997E1a (87865) 650  
Medium: 75% v/v dioxane/H2O, 0.10 M KNO3. Data for 10-40 C. DH(K1)=-7.71  
kJ mol<sup>-1</sup>, DS(K1)=-11.23 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-6.61, DS(K2)=-9.34.  
\*\*\*\*\*

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  
-----  
Dy+++            gl    mixed 30°C 0.10M U T H            K1=12.31 B2=22.77 1988TRb (87883) 651  
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

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Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Dy+++            gl    NaClO4 25°C 1.00M C    H            K1=14.89            1992YNa (87947) 652  
By calorimetry: DH(K1)=11.6 kJ mol<sup>-1</sup>, DS=324 J K<sup>-1</sup> mol<sup>-1</sup>  
\*\*\*\*\*

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  
-----  
Dy+++            gl    R4N.X 25°C 0.10M C            K1=3.22            1990CBe (88145) 653  
\*\*\*\*\*

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  
-----  
Dy+++            dis non-aq 25°C 100% U            B2=7.58            1990NIa (88264) 654  
B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate  
-----

Dy+++            ISE R4N.X 25°C 0.10M C            K1=2.60            1986XJa (88265) 655  
\*\*\*\*\*

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  
-----  
Dy+++            dis R4N.X 25°C 0.12M C            K1=1.21            1998SUa (88390) 656  
Medium: 0.12 M Et4NBr.

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

C14H22N2O8 H4L cis-1,2-CDTA CAS 92761-75-6 (2846)  
 cis-1,2-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KCl	25°C	1.0M	U		K1=4.70 K(DyHL+H)=4.48 K(DyL+H)=6.72	1987CMe (88429)	657

\*\*\*\*\*  
 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
Dy+++	gl	KCl	25°C	1.0M	U		K1=8.18 K(DyHL+H)=5.21 K(DyL+H)=7.08	1987CMe (88439)	658

\*\*\*\*\*  
 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
Dy+++	gl	KCl	25°C	1.0M	U		K1=8.96 K(DyHL+H)=5.78 K(DyL+H)=6.15	1987CMe (88454)	659

\*\*\*\*\*  
 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
Dy+++	gl	KCl	25°C	1.0M	U		K1=19.98 K(DyL+H)=1.35	1987CMe (88621)	660

Dy+++	gl	KCl	25°C	1.00M	U		K1=19.98	1984MHa (88622)	661
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Dy+++	gl	KN03	27°C	0.10M	U	M	K(Dy+L+HA)=13.32 K(DyL+HA)=5.79	1981KSe (88623)	662
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H2A=Citraconic acid

Dy+++	gl	NaClO4	25°C	0.50M	U		K1=18.70	1977GGB (88624)	663
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Dy+++	EMF	KN03	25°C	0.10M	U	T H	K1=19.69 DH(K1)=13.0 kJ mol <sup>-1</sup> , DS=414 J K <sup>-1</sup> mol <sup>-1</sup> . At 20 C: K(DyL+H)=2.16	1962MHa (88625)	664
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Dy+++	vlt	KN03	20°C	0.10M	U		K1=19.69	1954SGa (88626)	665
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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
Dy+++	gl	KCl	25°C	1.0M	U		K1=8.41 K(DyHL+H)=4.83 K(DyL+H)=7.28	1987CMe (88834)	666

\*\*\*\*\*

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
Dy+++	gl	KCl	25°C	1.0M	U		K1=9.03 K(DyHL+H)=5.75 K(DyL+H)=6.14	1987CMe (88851)	667

Dy+++	gl	KCl	25°C	1.00M	U		K1=9.03	1984MFb (88852)	668
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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
Dy+++	gl	R4N.X	25°C	0.10M	C		K1=8.73	1988CCb (88877)	669

\*\*\*\*\*

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
Dy+++	gl	NaNO3	25°C	0.10M	U	I	K(DyL+val)=3.889 K(DyL+leu)=3.782	2003ADb (89201)	670

Data for 0.15 and 0.05 M NaNO3. At I=0, K(DyL+val)=4.006, K(DyL+leu)=3.900

Dy+++	gl	NaNO3	25°C	0.10M	M	I M	K(DyL+ser)=3.652 K(DyL+thr)=3.575	2002ADa (89202)	671
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Data for 0.05 and 0.15 M NaNO3.

Dy+++	cal	KNO3	25°C	0.10M	C	T		1988MIa (89203)	672
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DH(K1)=-30.35 kJ mol<sup>-1</sup>, DS=335.0 J mol<sup>-1</sup> K<sup>-1</sup>. Also data for 283 and 313 K

Dy+++	cal	NaClO4	25°C	0.10M	C	H		1987YJa (89204)	673
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DH(K1)=-27.9 kJ mol<sup>-1</sup>, DS(K1)=344 J K<sup>-1</sup> mol<sup>-1</sup>.

Dy+++	cal	NaClO4	25°C	0.50M	U	H		1977CGc (89205)	674
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DH(K1)=-44.7 kJ mol<sup>-1</sup>

Dy+++ gl NaCl04 25°C 0.50M U K1=21.11 1977GGb (89206) 675

Dy+++ cal KNO3 27°C 0.10M U H 1968CLd (89207) 676  
DH(K1)=-33.0 kJ mol<sup>-1</sup>, DS=326 J K<sup>-1</sup> mol<sup>-1</sup>

Dy+++ EMF KNO3 25°C 0.10M U H K1=22.82 1962MTc (89208) 677  
DH(K1)=-33.5 kJ mol<sup>-1</sup>, DS=325 J K<sup>-1</sup> mol<sup>-1</sup>

Dy+++ gl oth/un 25°C 0.10M U K1=23.46 1959HCa (89209) 678  
\*\*\*\*\*

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

Dy+++ vlt KNO3 20°C 0.10M U K1=17.58 1969NDc (89506) 679  
\*\*\*\*\*

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

Dy+++ vlt KNO3 20°C 0.10M U K1=19.42 1974NLa (89527) 680  
\*\*\*\*\*

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

Dy+++ vlt KNO3 20°C 0.10M U K1=19.47 1968NLb (89630) 681  
\*\*\*\*\*

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

Dy+++ gl R4N.X 25°C 0.10M C K1=10.39 1988CCb (89648) 682  
\*\*\*\*\*

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

Dy+++ gl NaCl04 25°C 0.10M U 1995HAa (89678) 683

K(Dy+HL)=4.71  
K(Dy+H2L)=3.81

K(Dy+H3L)=2.79

B(DyHL)=14.14

B(DyH2L)=19.36, B(DyH3L)=22.51

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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  
-----

Dy+++ gl KNO3 25°C 0.10M U K1=11.72 1984TPa (89726) 684  
K(Dy+HL)=7.71

\*\*\*\*\*

C14H24N2O10 EGTA CAS 67-42-5 (349)

Ethylene glycol-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  
-----

Dy+++ gl alc/w 25°C 20% M TI K1=17.025 2000KDa (89853) 685  
Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Data for 0.05 and 0.15 M NaNO3.  
At I=0, K1=17.218. Data for 35 and 45 C and I=0.10 M NaNO3.

-----  
Dy+++ gl KCl 25°C 1.0M U M K2=1.55 1985KBb (89854) 686  
K(DyL+ida)=1.5

-----  
Dy+++ EMF KNO3 20°C 0.10M U K1=17.42 1962MMc (89855) 687

\*\*\*\*\*

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  
-----

Dy+++ gl KNO3 25°C 0.10M C K1=17.84 1985TPa (90097) 688

\*\*\*\*\*

C14H25N3O9 H4L CAS 4454-15-3 (5078)

((N-(2-Hydroxyethyl)-2,2'-iminodiethylene)dinitrilo)tetraethanoic acid;

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

Dy+++ vlt KCl ? 0.10M U K1=13.97 1968VLa (90113) 689

\*\*\*\*\*

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  
-----

Dy+++ gl R4N.X 25°C 0.10M M K1=11.55 1986COb (90181) 690

\*\*\*\*\*

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
Dy+++	ISE	non-aq	25°C	100%	C		K1=15.4	1986ALa (90360)	691
Medium: propylene carbonate, 0.1 M Et4NClO4									
*****									
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
Dy+++	gl	R4N.X	25°C	0.10M	C		K1=7.15	1988CCc (90477)	692
*****									
C14H3007		L					CAS 1072-40-8 (2499)		
2,5,8,11,14,17,20-Heptaohaxaheneicosane; CH3.0.(CH2.CH2.0)6.CH3									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	non-aq	25°C	100%	C		K1=5.87	1989BP a (90690)	693
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
Dy+++	gl	R4N.X	25°C	0.10M	U		K1=12.95 K(Dy+HL)=10.54 K(Dy+H2L)=6.01	1996BJa (90761)	694
Medium: 0.1 M Me4NCl									
*****									
C15H11N04		HL					CAS 1776-18-7 (955)		
3-Phenyl-1-(2'-hydroxy-5'-nitrophenyl)-2-propen-1-one;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	alc/w	35°C	70%	U		K1=6.61 B2=13.14	1982SLb (91076)	695
*****									
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
Dy+++	sp	alc/w	21°C	50%	U I		K1=9.58	1981MCb (91210)	696
Medium: 50% MeOH, 0.1 M NaClO4. In 75% MeOH K1=11.42									
*****									
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

Dy+++ gl diox/w 25°C 75% C TIH K1=7.08 B2=13.55 1989SVa (91304) 697  
DH(K1)=-63.98 kJ mol<sup>-1</sup>

\*\*\*\*\*

C15H1102Br 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  
-----

Dy+++ gl alc/w 35°C 70% U K1=7.17 1982SLb (91369) 698

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C15H1102Cl 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  
-----

Dy+++ gl alc/w 35°C 70% U K1=7.06 B2=13.79 1982SLb (91387) 699

Dy+++ gl alc/w 35°C 70% U K1=7.06 B2=13.79 1980SLb (91388) 700

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C15H1205 HL (1261)

mono-Thiodibenzoylmethane; C<sub>6</sub>H<sub>5</sub>.CO.CH<sub>2</sub>.CS.C<sub>6</sub>H<sub>5</sub>

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

Dy+++ gl NaCl04 30°C 0.05M U K1=9.26 B2=18.08 1979VMa (91490) 701  
K3=7.14

\*\*\*\*\*

C15H1202 HL CAS 1214-47-7 (951)

3-Phenyl-1-(2'-hydroxyphenyl)-2-propen-1-one, 2'-hydroxychalkone;

C<sub>6</sub>H<sub>5</sub>.CH:CH.CO.C<sub>6</sub>H<sub>4</sub>.OH

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

Dy+++ gl alc/w 35°C 70% U K1=8.26 B2=15.96 1982SLb (91581) 702  
Medium: 70% EtOH, 0.1 M KNO<sub>3</sub>

Dy+++ gl alc/w 35°C 70% U K1=9.26 B2=16.96 1980SLb (91582) 703

\*\*\*\*\*

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  
-----

Dy+++ gl alc/w 30°C 60% U M K1=6.82 B2=13.35 1990DOb (91663) 704  
K(DyA+L)=5.72  
K(DyB+L)=5.42  
K(DyC+L)=4.89

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  
-----

Dy+++ gl diox/w 30°C 75% M K1=7.20 2000ANa (91688) 705  
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  
-----

Dy+++ gl diox/w 30°C 50% U 1987DDc (91783) 706

K(Dy+HL)=7.35

K(DyHL+HL)=6.66

\*\*\*\*\*

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

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

Dy+++ gl diox/w 30°C 50% U 1987DDc (91789) 707

K(Dy+HL)=7.77

K(DyHL+HL)=7.06

\*\*\*\*\*

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

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

Dy+++ gl diox/w 30°C 50% U 1987DDc (91795) 708

K(Dy+HL)=7.57

K(DyHL+HL)=7.10

\*\*\*\*\*

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

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

Dy+++ gl diox/w 30°C 50% U 1987DDc (91801) 709

K(Dy+HL)=7.47

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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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Dy+++	gl	diox/w	30°C	50%	U				1987DDc (91807)	710
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K(Dy+HL)=6.87

K(DyHL+HL)=6.57

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
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Dy+++	gl	alc/w	20°C	75%	U T H			K1=11.51 B2=20.17	1993RAa (92017)	711
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Medium: 75% v/v MeOH/H2O; 0.10 M KNO3

Dy+++	gl	mixed	30°C	0.10M	U T H			K1=12.48 B2=23.29	1988TRb (92018)	712
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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
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Dy+++	gl	KNO3	25°C	0.10M	C			K1=13.02	1978MPb (92148)	713
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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
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Dy+++	sp	non-aq	25°C	100%	M			K1=7.5 B2=14.80	1997RPb (92280)	714
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B3=22.5

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
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Dy+++	EMF	KCl	?	0.10M	U			K1=16.71	1966VL a (92367)	715
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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
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Dy+++	gl	KNO3	25°C	0.10M	C			K1=19.54	1989SPa (92390)	716
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K(Dy+HL)=13.51

C15H26N4O9 H4L (7685)  
Diethylenetriamine-N,N,N',N'',N''-pentaethanoic acid N'-methylethylamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	KCl	25°C	0.10M	C			K1=20.5	2000SBb (92428)	717

C15H26N4O9 H4L CAS 137076-43-8 (5085)  
Diethylenetriamine-N,N,N',N'',N''-pentaethanoic acid N-methylethylamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	KCl	25°C	0.10M	C			K1=19.3	2000SBb (92443)	718

C15H33NO6 L CAS 70384-51-9 (838)  
Tris(3,6-dioxahexyl)amine; (CH3.CH2.O.CH2.CH2.O.CH2.)3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	ISE non-aq	25°C	100%	C				K1=9.5 B2=17.5	1986ALa (92563)	719

Medium: propylene carbonate, 0.1 M Et4NClO4

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
Dy+++	kin oth/un	25°C	0.02M	U				K1=5.18	1972GSe (92649)	720

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
Dy+++	gl	NaCl	25°C	0.10M	U			K1=11.17 B2=21.03 B3=28.17	1997IHa (93112)	721

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
Dy+++	gl	diox/w	30°C	75%	M			K1=7.39	1987ESa (93126)	722

C16H13N2O10AsS2 H5L Thorin I CAS 3688-92-4 (2609)  
1-((2-Arsenophenyl)azo)-2-hydroxy-3,6-naphthalenyldisulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	75%	U		K1=9.93 B2=18.53	1988ESb (93774)	730
*****									
C16H18N4		L					CAS 172665-46-2	(7699)	
N,N'-Dimethyl-1,10-phenanthroline-2,9-dimethanamine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	U		K1=7.95 B(DyHL)=14.93	2001WZa (93840)	731
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
Dy+++	vlt	KN03	20°C	0.10M	U		K1=18.42	1969NDb (94035)	732
*****									
C16H23N08		HL					(6776)		
19-Nitro-3,6,9,12,15-pentaoxabicyclo[15.13.1]heneicosa-1(21),17,19-trien-21-ol;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	R4N.X	25°C	0.10M	C		K1=3.05	1990CBe (94256)	733
*****									
C16H23N08		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
Dy+++	ISE	R4N.X	25°C	0.10M	C		K1=3.36	1986XJa (94264)	734
*****									
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
Dy+++	dis	R4N.X	25°C	0.12M	C		K1=0.87	1998SUa (94475)	735
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

Dy+++ gl R4N.X 25°C 0.10M C K1=9.31 1988CCb (94566) 736  
\*\*\*\*\*

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  
-----

Dy+++ sp KCl 25°C 0.08M U K1=11.4 1994FCa (94665) 737  
\*\*\*\*\*

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  
-----

Dy+++ sp KCl 25°C 0.08M U K1=15.1 1994FCa (94681) 738  
\*\*\*\*\*

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  
-----

Dy+++ gl KNO3 20°C 0.10M U K1=14.41 1969NDc (94708) 739  
By polarography: K1=14.45  
\*\*\*\*\*

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  
-----

Dy+++ vlt KNO3 20°C 0.10M U K1=17.63 1969NDc (94734) 740  
\*\*\*\*\*

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  
-----

Dy+++ vlt KNO3 20°C 0.10M U K1=19.57 1979MBd (94760) 741  
\*\*\*\*\*

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  
-----

Dy+++ gl NaCl 37°C 1.0M C K1=23.5 1994TBb (94887) 742  
Method: Competitive reaction with Eu3+ ion.  
\*\*\*\*\*

C16H29N5O8 H3L (6505)  
Diethylenetriaminepentaethanoic acid N,N'-bismethylamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	C	H	K1=17.9	1993RCa (94996)	743

DH(K1)=-24.1 kJ mol<sup>-1</sup>, DS(K1)=262 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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
Dy+++	gl	R4N.X	25°C	0.10M	U		K1=11.57	1983CRb (95032)	744

\*\*\*\*\*

C17H12N3O3Cl 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
Dy+++	gl	diox/w	30°C	70%	U		K1=5.38 B2=9.32 B3=11.91	1987ECa (95689)	745

\*\*\*\*\*

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
Dy+++	gl	diox/w	30°C	70%	U		K1=5.28 B2=9.09 B3=11.60	1987ECa (95706)	746

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	50%	U		K(Dy+HL)=7.49 K(DyHL+HL)=6.98	1987DDc (95731)	747

\*\*\*\*\*

C17H13NO3 HL CAS 98399-88-3 (6195)  
 8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one-anil;  
 C6H5.N:CH.C9H3O(CH3)(OH)(:O)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	70%	U		K1=6.01 B2=10.67 B3=13.83	1987ECa (95737)	748

\*\*\*\*\*

C17H13N4O3 HL (5927)  
 1-Phenyl-3-methyl-4-(2'-carboxyphenylhydrazo)-5-pyrazolone;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  diox/w 30°C  75%  M      K1=15.99  B2=28.42  1987ESa (95763) 749
*****
C17H14N2O2          L                      CAS 4551-69-3  (698)
4-Benzoyl-3-methyl-1-phenyl-2-pyrazolin-5-one;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  NaNO3  20°C 0.10M U    M                      1981GCa (95877) 750
                      B(Dy+3L+2TBP)=23.82
                      B(Dy+3L+TBPOxide)=22.5
                      B(Dy+3L+4TBPOxide)=33.2
*****
C17H15N4O2          L                      CAS 97671-53-9 (5926)
1-Phenyl-3-methyl-4-(2'-methoxyphenylhydrazo)-5-pyrazolone;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  diox/w 30°C  75%  M      K1=8.46   B2=16.43  1987ESa (96004) 751
*****
C17H16N2O3S2        L                      CAS 127335-83-5 (6849)
Sulfafurazole thiophene-2-aldehyde Schiff base; C4H3S.CH:N.C6H4.SO2.NH.C4HO(CH3)2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  oth/un 25°C 0.10M U T    K1=5.24          1990TSa (96036) 752
30 C: K=5.05, 35 C: K=4.95
*****
C17H16O4            H2L                      CAS 58134-82-0  (6193)
Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;
C6H5.CO.CH2.CO.C6H2(OH)(OCH3)(CH3)
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  alc/w  30°C  75%  U    M    B2=14.45          1991GDd (96148) 753
Medium: 75% v/v EtOH/H2O, 0.1 M NaClO4. K(Dy(Acetylacetone)+L)=12.24
-----
Dy+++      gl  alc/w  30°C  75%  U T H    K1=8.10   B2=15.16  1987DGd (96149) 754
20 C:K1=7.82, K2=7.21; 40 C:K1=8.25, K2=7.63; 50 C:K1=8.50, K2=7.82
DH(K1)=-42.2 kJ mol-1, DS=17 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
-----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  diox/w 30°C  50%  U                      1987DDc (96242) 755

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K(Dy+HL)=7.46

\*\*\*\*\*

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
Dy+++	gl	alc/w	22°C	0.1M	U		K1=5.80 B2=10.57	2000TBb (96282)	756
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
Dy+++	sp	NaNO3	25°C	0.10M	C		K1=8.46 K(Dy+HL)=2.79	19880Ha (96416)	757

\*\*\*\*\*

C17H27N04 L CAS 71089-11-7 (7945)  
13-Phenylmethyl-1,4,7,10-tetraoxa-13-azacyclopentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	cal	non-aq	25°C	100%	C	H	K(DyNO3+L)=3.21	1993LLb (96530)	758
Medium: acetonitrile. DH(DyNO3+L)=-74.31 kJ mol <sup>-1</sup> .									

\*\*\*\*\*

C17H29N3O10 H4L CAS 89378-46-1 (5528)  
(Bis(3-(bis(carboxymethyl)amino)propyl)methylammonio)ethanoate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	KN03	25°C	0.10M	U		K1=9.00 K(Dy+HL)=6.02	1984TPa (96568)	759

\*\*\*\*\*

C18H15N03 HL (6196)  
8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one 4-methylanil;  
CH3.C6H4.N:CH.C9H3O(OH)(CH3)(O)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	70%	U		K1=6.78 B2=12.36 B3=16.28	1987ECa (96993)	760

\*\*\*\*\*

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
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Dy+++ gl diox/w 30°C 75% U K1=10.90 B2=20.53 1988ESb (97167) 761

\*\*\*\*\*

C18H18N4 L CAS 16858-01-8 (1528)

Tris(2-pyridylmethyl)amine; (C5H4NCH2)3N

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

-----  
Dy+++ nmr KCl 25°C 1.0M C K1=1.87 2004BRa (97256) 762

Method: 1H nmr measurements in D2O.

\*\*\*\*\*

C18H20N2O6 H4L EHPG CAS 10328-28-6 (429)

N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (H00CCH(C6H4OH)NHCH2.)2

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

-----  
Dy+++ EMF KNO3 25°C 0.10M C T H K1=20.31 1985HWb (97422) 763

K(DyL+H)=7.16

Method: Hg (and glass) electrode, using Hg(II) as competitive indicator ion. Data for 10-35 C. DH(K1)=-64.6 kJ mol<sup>-1</sup>, DS(K1)=172 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

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

-----  
Dy+++ gl KNO3 25°C 0.10M C K1=15.35 1985TPa (97650) 764

\*\*\*\*\*

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

-----  
Dy+++ gl non-aq 25°C 100% U K1=2.90 1982MDa (97803) 765

Medium: propylene carbonate

\*\*\*\*\*

C18H30N2O11 H2L CAS 93049-99-1 (5832)

1,4,7,10,13-Pentaoxa-16,19-diazacycloeicosane-14,21-dione-16,19-diethanoic acid;

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

-----  
Dy+++ gl R4N.X 25°C 0.10M C K1=9.49 1988CCb (97906) 766

\*\*\*\*\*

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)

Triethylenetetraaminehexaethanoic acid;((H00C.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

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

-----  
Dy+++ EMF KNO3 25°C 0.10M C T H K1=23.13 1987HCa (98019) 767

K(DyL+H)=4.57

$$K(\text{DyHL}+\text{H})=2.79$$

Method: Hg electrode; competitive reaction with Hg(II).

Data for 15-35 C. At 25 C,  $\text{DH}(\text{K1})=104 \text{ kJ mol}^{-1}$ ,  $\text{DS}(\text{K1})=793 \text{ J K}^{-1} \text{ mol}^{-1}$ .

-----  
Dy+++ vlt R4N.X 30°C 0.01M C K1=19.72 1981GMh (98020) 768  
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.

-----  
Dy+++ vlt NaClO4 25°C 0.40M C K1=23.29 1978MNB (98021) 769  
Medium: 0.40 M NaClO4, pH 4.80. Method: polarography, using Cd as  
indicator ion.

\*\*\*\*\*  
C18H32N4O8 H4L TETA CAS 60239-22-7 (1019)  
1,4,8,11-Tetraazacyclotetradecane-1,4,8,11-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Dy+++ EMF NaCl 80°C 1.00M C K1=16.04 1986LDB (98196) 770  
K(DyL+H)=3.10

\*\*\*\*\*  
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  
-----  
Dy+++ gl R4N.X 25°C 0.10M C K1=6.70 1988CCc (98334) 771  
\*\*\*\*\*  
C18H34N4O9 H3L DO3A-B (7301)  
10-[2,3-Dihydroxy-(1-hydroxymethyl)-propyl]-1,4,7,10-tetraazacyclododecane-1,4,7-triethanoic ac.;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Dy+++ gl NaCl 25°C 0.10M C I K1=19.1 1996TKa (98376) 772  
In 0.1 M Me4NCl K=21.2

\*\*\*\*\*  
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  
-----  
Dy+++ ISE non-aq 25°C 100% C K1=17.1 1986ALa (98562) 773  
Medium: propylene carbonate, 0.1 M Et4NClO4

-----  
Dy+++ gl alc/w 25°C 100% C I K1=10.45 1983ANb (98563) 774  
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4  
In propylene carbonate, 0.1 M Et4NClO4, K1=19.0.

\*\*\*\*\*  
C18H40N2O10P2 H2L (7241)  
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diylldimethylenediphosphonic acid  
bis(Et-ester);

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  R4N.X  25°C 0.10M U      K1=7.10      1996BJa (98889) 775
Medium: 0.1 M Me4NCl
*****
C19H16N4O          L      LAMI          (5930)
2-(2'-Lepidylazo)-N-methylisatin
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  diox/w 30°C 75% M I      K1=10.37 B2=19.18 1987DGc (99163) 776
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;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  NaClO4 30°C 0.10M U      M      K1=12.0 B2=22.32 1987S0a (99563) 777
                        K(DyA+L)=10.39
                        K(DyB+L)=9.79
H2A=hydroxyethyliminodiethanoic acid, H3B=nitrilotriethanoic 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;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  alc/w  30°C 50% C      M      K1=12.14 B2=22.62 1994S0a (99647) 778
                        K(DyA+L)=10.54
                        K(Dy(nta)+L)=10.00
Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4.
H2A is hydroxyethyliminodiethanoic acid.
-----

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-----
Dy+++      gl  NaClO4 30°C 0.10M U T H      K1=13.82      1991NNb (99648) 779
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;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  diox/w 30°C 50% U      K1=11.94      1976NNa (99688) 780
*****
C20H14N2O11S3      H5L      Chromotrope 8B CAS 5850-64-6 (2674)
3-(4'-Sulfonaphthylazo)chromotropic acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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-----  
Dy+++ sp NaClO4 25°C 0.10M C K1=6.27 1979PLb (99708) 781  
\*\*\*\*\*

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  
-----

Dy+++ sp none 25°C 0.0 U K1eff=3.71 1978BRb (99727) 782  
-----

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  
-----

Dy+++ gl diox/w 30°C 75% U K(Dy+HL)=5.33  
K(Dy+2HL)=11.18  
\*\*\*\*\*

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  
-----

Dy+++ gl KNO3 20°C 0.10M U K1=19.90 1985SNb (99990) 784  
K(DyL+H)=5.22  
K(DyHL+H)=4.80  
\*\*\*\*\*

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  
-----

Dy+++ gl oth/un 25°C 0.0 U H K1=2.80 1991HJa (100115) 785  
\*\*\*\*\*

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  
-----

Dy+++ dis R4N.X 25°C 0.12M C K1=1.16 1998SUa (100278) 786  
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  
;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      sp  KCl      25°C 0.08M U          K1=17.2          1994FCa (100553) 787
*****
C20H37N5O10      H3L      MEA          CAS 129009-83-2 (7322)
N,N'-Bis(2-methoxyethylcarbamoylmethyl)diethylenetriamine;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  NaClO4 25°C 0.10M C  H      K1=17.03          1997ICa (100733) 788
DH(K1)=-26.3 kJ mol-1, DS=238
*****
C21H17N5          L          (7365)
2,6-Bis(1-methylbenzimidazol-2-yl)pyridine
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  non-aq 25°C 100% C          K3=5.8          1997PBa (101084) 789
Medium: CH3CN; 0.1 M Et4NClO4
*****
C21H30N4O8      H3L      Tyr-Val-Asp-Ala (6015)
Tyrosyl-valyl-aspartyl-alanine
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      nmr KCl      25°C 0.50M U          K1=3.11          1987ZAa (101366) 790
K(Dy+HL)=2.48 ?
K(Dy+H2L)=0.70 ?
*****
C22H14O9          H5L          CAS 4431-00-9 (3513)
Aurintricarboxylic acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      sp  oth/un 25°C  ?  U          K(Dy+HL)=4.9(?)  1967SAa (101494) 791
*****
C22H17AsN4O14S3      H6L      Arsenazo M      CAS 3563-69-7 (623)
2-(2-Arsonophenylazo)-7-(3-sulfophenylazo)-1,8-dihydroxynaphthalene-3,6-disulfonic
acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      sp  oth/un  ?  ?  U          K1=15.31          1971SSi (101541) 792
*****
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
Dy+++	sp	oth/un	rt	0.10M	C			2004LLa (101613)	793

K1eff=5.28  
B2eff=9.47  
B(2,2)eff=14.62

Method: spectral deconvolution. Medium: 0.1 M chloroacetate buffer, pH 3.5

Dy+++	sp	oth/un	25°C	var	U	I		1997HRb (101614)	794
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K1(eff)=7.433  
B(DyLC1)eff=6.945  
B(DyL2C1)eff=13.654

Conditional constants in chloride medium at pH 3.3. Also data in sulfate and perchlorate media. K(Dy+Cl)=1.887.

Dy+++	sp	oth/un	20°C	?	U			1972SSi (101615)	795
-------	----	--------	------	---	---	--	--	------------------	-----

K(Dy+H4L)=16.66

Dy+++	sp	NaNO3	20°C	0.20M	U			1963BUa (101616)	796
-------	----	-------	------	-------	---	--	--	------------------	-----

B(Dy2L2)=83.0

\*\*\*\*\*  
C22H19N3O4S HL CAS 84819-63-6 (8347)  
N-(3,4-DiMe-5-isoxazolyl)-4-[[ (2-hydroxy-1-naphthalenyl)methylene]amino]benzenesulfonamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	U		K1=5.08	1982MBa (101685)	797

\*\*\*\*\*

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
Dy+++	EMF	KNO3	25°C	0.10M	C	T H	K1=11.13	1990HLA (101893)	798

K(DyL+H)=3.41

Method: Competitive reaction with Hg++, using Hg indicator electrode.

Data for 15-35 C. DH(K1)=-38.3 kJ mol<sup>-1</sup>, DS(K1)=84.8 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C22H26N4O10	H4L	BAPTA	(7230)
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1,2-Bis(o-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;

((HOOCH2)2NCH(OC6H4NH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	R4N.X	25°C	0.10M	C		K1=10.73	1993YTa (101974)	799

\*\*\*\*\*

C22H28O13S2	H2L	DSDB21C7	CAS 204931-02-2	(7821)
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2,3:11,12-Dibenzo-1,4,7,10,13,16,19-heptaoxacycloheicosa-2,11-diene-4',4''-disulfonic acid;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      dis R4N.X  25°C 0.12M C          K1=1.51          1998SUa (102074) 800
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
*****
C22H29N3O12          H6L                      CAS 362606-74-4 (8226)
N,N'-[2-[[Bis(carboxymethyl)amino]methyl]-2-phenyl-1,3-propanediyl]bis[N-(carboxyme
thyl)-glycine;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  R4N.X  25°C 0.10M C          K1=14.85          2001VSa (102087) 801
                                K(DyL+H)=6.51
                                K(DyHL+H)=3.95
                                K(DyH2L+2H)=6.59
Medium: 0.10 M Me4NCl.
*****
C22H30N4          L                      CAS 250790-21-7 (7943)
N,N'-Bis(1,1-dimethylethyl)-1,10-phenanthroline-2,9-dimethanamine;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  NaClO4 25°C 0.10M U          K1=8.66          2001WZa (102111) 802
                                B(DyHL)=15.52
Also data for the N,N'-diethyl, isopropyl, butyl and isobutyl derivatives.
*****
C22H37N5O14          H7L                      CAS 3234-59-1 (2425)
Tetraethylenepentamineheptaethanoic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      vlt R4N.X  30°C 0.01M C          K1=20.44          1981GMh (102320) 803
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.
-----
Dy+++      gl  KNO3   25°C 0.10M U          K1=20.72          1968MIc (102321) 804
                                K(Dy+HL)=14.13
                                B(DyH-1L)=5.22
*****
C22H40N4O8          H4L                      CAS 138763-18-5 (8607)
5,7,12,14-Tetramethyl-1,4,8,11-tetraazacyclotetradecane-N,N',N'',N'''-tetraethanoic
acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Dy+++      gl  KNO3   40°C 0.50M U T          K1=18.18          1995BIa (102354) 805
                                K(DyL+H)=4.17
Also data for 80 C.
*****

```



C22H40N4O11 H4L (6529)  
 1,4,7-Trioxa-10,13,16,19-tetraazacycloheneicosane-10,13,16,19-tetraethanoicacid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	R4N.X	25°C	0.10M	C			K1=16.7 K(Dy+HL)=11.5 K(Dy+H2L)=5.2	1990SBc (102365)	806

\*\*\*\*\*  
 C22H41N5O10 H3L MMEA CAS 192631-00-8 (7323)  
 N,N'-Bis(methyl-2-methoxyethylcarbamoylmethyl)diethylenetriamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	C	H		K1=18.46	1997ICa (102391)	807

DH(K1)=-34.5 kJ mol<sup>-1</sup>, DS=222

\*\*\*\*\*  
 C23H16O9Cl2S H4L Chrome azurol S CAS 1667-99-8 (711)  
 Chromazurol S;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	sp	oth/un	25°C			? U		K(?)=4.2	1967SAa (102548)	808

\*\*\*\*\*  
 C23H18N2O3 HL (5561)  
 2-(2-Acetylphenylhydrazon)-1,3-diphenyl-prop-1,3-dione;  
 C6H5.CO.C(CO.C6H5):N.NH.C6H4.COCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	75%	U			K1=10.94 B2=19.47	1988ESb (102590)	809

\*\*\*\*\*  
 C23H24N4O2 L Trichachnine CAS 1251-85-0 (2606)  
 4,4'-Diantiprylmethane,  
 4,4'-phenylmethylen-bis-(1,2-dihydro-1,5-dimethyl-2-phenylpyrazol-3-one

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	sp	diox/w	25°C	100%	U			K1=3.76	1995KMa (102669)	810

\*\*\*\*\*  
 C24H32O14S2 H2L CAS 204931-03-3 (7822)  
 2,3:11,12-Dibenzo-1,4,7,10,13,16,19,22-octaioxacyclotetracos-2,14-diene-4',4"-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	dis	R4N.X	25°C	0.12M	C			K1=1.63	1998SUa (103190)	811

Medium: 0.12 M Et4NBr.  
 Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

\*\*\*\*\*

C24H44N4O12 H4L (6530)  
1,4,7,10-Tetraoxa-13,16,19,22-tetraazacyclotetracosane-13,16-19,22-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	R4N.X	25°C	0.10M	C		K1=18.0 K(Dy+HL)=11.4	1990SBc (103407)	812

\*\*\*\*\*

C24H45N5O12 H3L HEMEA CAS 185214-83-9 (7324)  
N,N'-Bis(2-hydroxyethyl-2-methoxyethylcarbamoylmethyl)diethylenetriamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	NaClO4	25°C	0.10M	C	H	K1=17.61	1997ICa (103442)	813

DH(K1)=-34.5 kJ mol<sup>-1</sup>, DS=222

\*\*\*\*\*

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
Dy+++	gl	KNO3	25°C	0.5M	C		K1=5.83	1993YNa (103728)	814

\*\*\*\*\*

C26H23N5O2 HL (5918)  
Hippuric monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	75%	U		K1=11.81 B2=21.95	1985RSb (103877)	815

\*\*\*\*\*

C26H27N3O10 H4L (7231)  
2-((2-Amino-5-methylphenoxy)-methyl)-6-methoxy-8-aminoquinoline-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	R4N.X	25°C	0.10M	C		K1=14.2	1993YTa (103960)	816

\*\*\*\*\*

C26H43N6 HL Glycocholic ac. CAS 475-31-0 (5821)  
N-Cholylglycine, N-3,7,12-Trihydroxy-24-oxocholan-24-yl-glycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	nmr	oth/un	25°C	?	U		K1eff=2.38	1986KBb (104271)	817

At pH 5.0

\*\*\*\*\*

C26H45N7S HL Taurocholic ac. CAS 145-42-6 (5822)

Cholyltaurine; 5-Cholan-24-oic acid N-(2-sulfoethyl)amide-3,7,12-triol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	nmr	oth/un	25°C	?	U		K1eff=1.60	1986KBb (104276)	818

At pH 5.0

\*\*\*\*\*  
C26H48N4O13 H4L (6531)  
1,4,7,10,13-Pentaoxa-16,19,22,25-tetraazacycloheptacosane-16,19,22,25-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	R4N.X	25°C	0.10M	C		K1=16.9 K(Dy+HL)=11.1 K(Dy+H2L)=5.0	1990SBc (104302)	819

\*\*\*\*\*  
C27H24N4O L BAHP (1023)  
Benzoylacetone-monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	gl	diox/w	30°C	75%	U		K1=8.50	1983RSa (104381)	820

\*\*\*\*\*  
C27H29NO11 L Adriamycin CAS 25316-40-9 (2407)  
Doxorubicin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	sp	oth/un	25°C	0.02M	U T H		K1=4.89	1985LSa (104453)	821

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
Dy+++	nmr	KCl	25°C	0.50M	U		K(Dy+HL)=3.09 ? K(Dy+H2L)=2.42 ? K(Dy+H3L)=0.75 ?	1987ZAa (104584)	822

\*\*\*\*\*  
C28H24O16S4 H8L CAS 206559-10-6 (7767)  
25,26,27,28-Tetrahydroxycalix[4]arene-5,11,17,23-tetrasulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	cal	oth/un	25°C	0.10M	C H		K(Dy+H4L)=3.88	2001BIa (104694)	823

Medium: 0.10 m Na4H4L, pH=2. DH(Dy+H4L)=10.1 kJ mol<sup>-1</sup>.

\*\*\*\*\*

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  
-----  
Dy+++              gl    KCl        40°C 0.50M M              K1=10.41              1997BZa (104822) 824

\*\*\*\*\*

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  
-----  
Dy+++              gl    non-aq 25°C 100% U              K1=3.40              1980MDb (104837) 825  
Medium: Propylene carbonate.

Medium: propylene carbonate

\*\*\*\*\*

C28H52N4O14                      H4L                      (6532)  
1,4,7,10,13,16-Hexaoxa-19,22,25,28-tetraazacyclotriacontane-19,22,25,28-tetraethanoic acid;

-----  
Metal              Mtd Medium Temp Conc Cal Flags Lg K values              Reference ExptNo  
-----  
Dy+++              gl    R4N.X    25°C 0.10M C              K1=17.6              1990SBc (104996) 826  
K(Dy+HL)=10.9

\*\*\*\*\*

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  
-----  
Dy+++              gl    diox/w 30°C 75% U I              K1=9.52              1983RRa (105400) 827  
In 75% MeOH: K1=7.67; 75% DMF: 6.43

\*\*\*\*\*

C31H32N2O13S                      H6L              Xylenol orange              CAS 63721-85-5 (432)  
5,5'-Bis-N,N-bis(carboxymethyl)aminomethyl-4'-hydroxy-3,3'-dimethylfuchsone-2"-sulfonic acid;

-----  
Metal              Mtd Medium Temp Conc Cal Flags Lg K values              Reference ExptNo  
-----  
Dy+++              sp    NaNO3    20°C 0.20M U              B(Dy2L2)=47.6              1963BBb (105461) 828

\*\*\*\*\*

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  
-----  
Dy+++              nmr    KCl        25°C 1.0M C              K1=2.32              2004BRa (105966) 829

Method: 1H nmr measurements in D2O.

\*\*\*\*\*

C36H60O30 L a-Cyclodextrin CAS 10016-20-3 (6946)  
alpha-Cyclodextrin, Cyclohexaamylose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	NaCl	25°C	0.10M	U	I		K1=3.23	1999FBa (106459)	830

In 0.1 M Me4NCl, K1=3.77.

\*\*\*\*\*

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
Dy+++	gl	NaClO4	30°C	0.10M	U			K(Dy+H3L)=4.45 K(Dy+H2L)=7.08 K(DyH2L+H)=4.50	1980NAb (106591)	831

Also data for DyHnL(OH) species

\*\*\*\*\*

C47H46N6O4 L (7367)  
2,6-Bis(1-(3,5-dimethoxybenzyl)benzimidazol-2-yl)-4-(4-diethylamino)phenylpyridine  
;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	gl	non-aq	25°C	100%	C			K3=5.2	1997PBa (107314)	832

Medium: CH3CN; 0.1 M Et4NClO4

\*\*\*\*\*

C62H94N2O4S2 L (8109)  
5,11,17,23-Tetrakis(1,1-dimethylethyl)-25-27-bis[2-methylthio]ethoxy]...calix(4)are  
ne;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	cal	non-aq	25°C	100%	U	H		K1=3.58	2001NJa (107700)	833

Method: microcalorimetry. Medium: MeCN.. DH(K1)=-207 kJ mol<sup>-1</sup>

\*\*\*\*\*

C76H116N4O8 L (8156)  
p-tert-Butylcalix(4)arene tetradiisopropylethanoamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Dy+++	cal	non-aq	25°C	100%	U	H		K1=4.69	2001NJa (107877)	834

Method: microcalorimetry. Medium: MeCN.. DH(K1)=-69.1 kJ mol<sup>-1</sup>

\*\*\*\*\*

Polymer HL Bleomycin (2324)  
Bleomycin A2, B2 etc.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Dy+++	sp	oth/un	25°C	?	U			1980LPb (108085)	835
							K1eff=4.65 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

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