

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 495 experiments for  
(no ligands specified)

Metal : Ga+++

(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
Ga+++	EMF	oth/un	135°C		U			K(Ga + 2Ga(l)=3Ga+)=13.4	1969APa (505)	1
Medium: (Na,K,Al)Cl										
Ga+++		oth oth/un	20°C	0.06M	U T			K(Ga+2Ga(s)=3Ga+)= -11.7	1968KEa (506)	2
Medium: 0.06M GaCl3. K=-10.1(30 C), -9.5(45 C), -9.0(60 C), K=-10.0?(90 C)										
Ga+++	EMF	none	25°C	0.0	M			K(Ga+3e=Ga(s))=-67.25, -1326 mV	1967VLc (507)	3
Ga+++	EMF	none	25°C	0.0	U			K=-64.2(-1261 mV)	1963C0c (508)	4
K: Ga(OH)4+3e=Ga(s)+4OH. K(Ga+2e=Ga(I))=<-13.5(-400 mV)										
Ga+++	EMF	oth/un	24°C	var	U			K=-64.2(-1261 mV)	1961EGa (509)	5
Medium: NaOH. K:(Ga(OH)4+3e=Ga(s)+4OH. Plus uncertain values up to 80 C										
Ga+++	EMF	none	25°C	0.0	U T H			K(Ga+3e=Ga(s))=-28.4(-560 mV)	1953SNb (510)	6
DH(K)=211.3 kJ mol-1, DS=164 J K-1 mol-1(25 C). K=-30.9(20 C, -599 mV), -27.8(28 C, -553 mV)										

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	cal	non-aq	25°C	100%	C			K1=1.97 B4=9.55	1996TSA (1939)	7
Medium: N,N-Dimethylformamide, 0.20 M Et4NC104. DH(K1)=19 kJ mol-1, DH(B4)=119.7 kJ mol-1.										
Ga+++	nmr	non-aq	25°C	100%	U	M		K(2GaXL=GaX2L+GaL)=-0.04	1974BTc (1940)	8

K(2GaX2L2=GaX3L+GaXL3)=-0.15

K(2GaX3L=GaX4+GaX2L2)=-0.08

Medium: MeCN. Method: nmr. X=Cl or I; values near statistical

-----  
Ga+++ dis NaClO4 20°C 0.69M U K1=-0.10 1967MAd (1941) 9  
Medium: HClO4; or K1=-0.24, B2=-0.5  
-----

Ga+++ oth NaClO4 80°C 7.50M U TIH B4=-3.0 1962NPb (1942) 10

Method: Raman spectra. 50-95 C. DH(B4)=47.7 kJ mol<sup>-1</sup>, DS=77 J K<sup>-1</sup> mol<sup>-1</sup>(80 C)  
In 14.9 M HClO4 B4=-3.5, DH(B4)=34, DS=32 (80 C). At 25 C: B4=-4.3

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C6N6Fe---- H4L (2191)

Hexacyanoferrate (II); Fe(II)(CN)6----

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Ga+++ sol oth/un 25°C var U Kso=-33.82 1956TGb (3568) 11

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Ga+++ cal non-aq 25°C 100% C K1=7 B4=28 1996TSa (4917) 12

Medium: N,N-Dimethylformamide, 0.20 M Et4NClO4.  
DH(K1)=11 kJ mol<sup>-1</sup>, DH(B4)=57.0 kJ mol<sup>-1</sup>

-----  
Ga+++ ISE non-aq 300°C 100% U K4=6.02 1985BAa (4918) 13

Medium: fused KCl/AlCl3

-----  
Ga+++ ix NaCl 25°C var U K1=-0.64 B2=-2.18 1974MIId (4919) 14  
B3=-3.90  
B4=-5.74

Medium: HCl

-----  
Ga+++ dis non-aq 25°C 100% U K(GaL4+H)=1.9 1972G0c (4920) 15

Medium: nitrobenzene

-----  
Ga+++ oth oth/un ? var U K3=-2.0 K4=-1.7 1971SCc (4921) 16

Method: ionophoresis

-----  
Ga+++ dis NaClO4 20°C 0.69M U K1=0.01 1967MAd (4922) 17  
-----

Ga+++ ix none 25°C 0.0 U K1=-0.6 B2=-2.3 1958MAb (4923) 18  
 K3=-2.2  
 K4=-1.3

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

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ ISE KNO3 25°C 0.10M C M K1=4.49 B2=7.99 1987YHa (6903) 19  
 K(GaA+F)= 3.37(H3A=NTA), 3.15(H3A=HEDTA), 2.3(H4A=EDTA), 2.1(H4A=CDTA)

-----  
 Ga+++ gl KNO3 25°C 0.50M M 1985TZb (6904) 20  
 K'=-1.72  
 K'=K(Ga(OH)4+HL=Ga(OH)2L+OH+H2O). No mixed S-Al-OH complexes

-----  
 Ga+++ nmr oth/un ? var U 1974BPc (6905) 21  
 K(Ga+GaF2=2GaF)=0.40  
 K(GaF+GaF3=2GaF2)=0.64  
 K(GaF2+GaF4=2GaF3)=0.57

Medium: (H,NH4)F. Method: nmr

-----  
 Ga+++ oth NaClO4 25°C 1.0M U K1=3.33 1974MGa (6906) 22  
 K(Ga+HF)=1.79

Medium: (Na,H)ClO4. Method: current-voltage studies

-----  
 Ga+++ EMF NaClO4 25°C 1.0M U H 1971WTa (6907) 23  
 K(Ga+HF=GaF+H)=1.43  
 K(GaF+HF=GaF2+H)=0.83

Method: quinhydrone electrode. By calorimetry: DH(K1)=10.5 kJ mol<sup>-1</sup>,  
 DS=119 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Ga+++ EMF NaClO4 25°C 0.50M U H 1967AHa (6908) 24  
 DH(K1)=7.5 kJ mol<sup>-1</sup>, DS=108.7 J K<sup>-1</sup> mol<sup>-1</sup>. At I=0 corr: DH(K1)=7.9, DS=142

-----  
 Ga+++ EMF NaClO4 25°C 0.50M U I 1964PCa (6909) 25  
 K(Ga+HF=GaF+H)=1.55  
 K(GaF+HF=GaF2+H)=0.57  
 K(GaF2+HF=GaF3+H)=-0.47

At I=0 corr: K1=5.86

-----  
 Ga+++ sp none 20°C 0.0 U K1=4.5 1960KLa (6910) 26  
 pH 2.7

-----  
 Ga+++ sp oth/un ? var U K1=4.5 1959BSg (6911) 27

-----  
 Ga+++ EMF NaClO4 25°C 0.50M U T H 1955YAA (6912) 28  
 K(Ga+HF=GaF+H)=1.54  
 K(GaF+HF=GaF2+H)=0.60  
 K(GaF2+HF=GaF3+H)=-0.44

At 5 C: \*K1=1.63, \*K2=0.76, \*K3=0.00. 50 C: \*K1=1.50, \*K2=0.60, \*K3=-0.70  
 DH(\*K1)=-5.4 kJ mol<sup>-1</sup>, DS=39 J K<sup>-1</sup> mol<sup>-1</sup>; DH(\*K2)=-6, DS=6; DH(\*K3)=-23, DS=-85

-----  
 Ga+++ sp NaClO4 25°C 0.50M U K1=5.02 1952WTa (6913) 29  
 K(Ga+HF=GaF+H)=2.08

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 I- HL Iodide CAS 10034-85-2 (20)  
 Iodide;

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

-----  
 Ga+++ con non-aq 140°C 100% U 1967BNc (8027) 30  
 K(GaI3+I2=I+GaI4)=-1.89

Medium: liquid I2

-----  
 Ga+++ dis NaClO4 20°C 0.69M U K1=-0.24 1967MAd (8028) 31  
 Medium:HClO4. Alternatively K1=-0.41, B2=-0.6

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 MoO4-- H2L Molybdate (443)  
 Molybdate;

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

-----  
 Ga+++ EMF NaClO4 25°C 1.00M U 1971ROa (8732) 32  
 K(Ga+6H+6MoO4)=48

\*\*\*\*\*  
 NH3 L Ammonia CAS 7664-41-7 (414)  
 Ammonia

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

-----  
 Ga+++ gl R4N.X 25°C 5.00M U K1=4.1 1985MMa (9158) 33  
 \*\*\*\*\*

NO2- HL Nitrite CAS 7782-77-6 (635)  
 Nitrite;

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

-----  
 Ga+++ gl NaClO4 25°C 1.00M U K1=2.1 1990EAa (9372) 34  
 \*\*\*\*\*

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

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

-----  
 Ga+++ gl NaClO4 25°C 1.00M C H K1=3.48 1982AVb (10228) 35  
 DH1=-23 kJ mol<sup>-1</sup>

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 OH- HL Hydroxide (57)  
 Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ga+++	gl	NaCl	25°C	0.60M	C		*K1=-4.02 *B(13,32)=-67.14	2002C0a (11485)	36
Ga+++	sol	none	25°C	dil	C T H		*Kso(Ga(OH)3)=17.4	1998DCa (11486)	37
Self medium, 0.01-0.07 M. Values extrapolated from data for 40-150 C. At 40 C, *Kso=16.1. DH(*Kso)=-136.45 kJ mol <sup>-1</sup> , DS=-124.0 J K <sup>-1</sup> mol <sup>-1</sup> .									
Ga+++	EMF	NaCl	25°C	0.0	C	TIH	*K1=-2.88	1998U0a (11487)	38
Method: Pt/H2 electrode. Data for 25-100 C. DH(*K1)=38.2 kJ mol <sup>-1</sup> , DS(*K1)=73 J K <sup>-1</sup> mol <sup>-1</sup> . In 1.0 M NaCl, *K1=-3.78.									
Ga+++	sol	none	25°C	0.0	M	T	*K1=-2.85 *B2=-7.28 *B3=-11.94 *B4=-15.66	1997BDb (11488)	39
Calculated from solubility data for alpha-GaOOH at 150-250 C in 0.025 M NaCl.									
Ga+++	sol	none	25°C	0.0	M	T	*Kso(GaOOH)=1.50 K(GaOOH(s)+H=Ga(OH)2)=-5.78 K(GaOOH(s)+H2O=Ga(OH)3)=-10.44	1997BDb (11489)	40
Calculated from solubility data for alpha-GaOOH at 150-250 C in 0.025 M NaCl. K(GaOOH(s)+2H=Ga(OH)+H2O)=-1.35 (*Ks2)									
Ga+++	sol	none	25°C	0.0	M	T		1997DPb (11490)	41
Calculated from solubility of alpha-GaOOH in dilute buffer solutions at 25-250 C. K(GaOOH(s)+2H2O=Ga(OH)4+H)=-14.14. At 50C, K=-13.33.									
Ga+++	sol	NaCl	100°C	0.0	C	I		1997U0a (11491)	42
Ks(GaOOH+3H)=-0.60.									
Ga+++	gl	NaClO4	25°C	0.10M	C	I	*K1=-3.11 *B(5,15)=-35.83	1992PSb (11492)	43
Data for 0.01-1.0 M NaNO3 and NaClO4. In 0.10 M NaNO3, *K1=-2.94, *B(5,15)=-35.51.									
Ga+++	nmr	oth/un	25°C	var	C		*K1=-2.6	1989AKc (11493)	44
Method:71Ga nmr. Medium: 0.3 or 1.0 M HClO4, 0.008-0.09 M Ga(ClO4)3.									
Ga+++	gl	KCl	25°C	1.00M	C			1989BHa (11494)	45

\*B3=-11.63

\*B4=-17.5

-----  
Ga+++ gl KNO3 25°C 0.10M C I 1989BRa (11495) 46

\*K1=-3.16

\*B2=-7.07

Also data at 0.5 M (-3.73; -7.15), 1.0 M (-3.92; -7.79), and  
1.5 M (-4.02; -7.73)

-----  
Ga+++ gl NaClO4 25°C 0.50M C TI 1985CTa (11496) 47

\*K1=-3.69

\*K2=-3.74

At T=10 C, \*K1=-4.17, \*K2=-4.04. At 25 C, I=0.1 M \*K1=-4.17, \*K2=-3.50;  
I=1.5 M \*K1=-4.15, \*K2=-2.82

-----  
Ga+++ sp NaClO4 25°C 0.50M U T H 1984YIa (11497) 48

\*K1=-2.89

At 45 C: \*K1=-2.52; 15 C: -3.01

-----  
Ga+++ sp NaClO4 25°C 0.10M U I K1=11.13 B2=21.46 1973BNc (11498) 49

B3=30.93

K1=11.52, B2=22.33, B3=32.31(I=0.3); K1=11.70, B2=22.80, B3=33.36(I=0.5);  
K1=12.22, B2=24.13, B3=35.85(I=1)

-----  
Ga+++ EMF NaClO4 ? 1.00M U 1973G0a (11499) 50

\*K1=-3.56

-----  
Ga+++ gl NaClO4 50°C 1.00M U 1971GIb (11500) 51

\*Kso(GaOOH(s)+3H=Ga+2H2O)=4.29

Method: also Tyndallometry, nephelometry

-----  
Ga+++ kin oth/un 25°C U 1970HRb (11501) 52

\*K1=-4.2

-----  
Ga+++ kin NaClO4 25°C 0.50M U 19700Ea (11502) 53

K(2GaOH=Ga2(OH)2)=1.70

-----  
Ga+++ gl NaClO4 25°C 0.30M U 1970PTc (11503) 54

\*K1=-5.45

\*B(2,2)=-8.33

\*K1: Me2Ga + H2O=Me2GaOH + H. \*B(2,2): 2Me2Ga + 2H2O=(Me2Ga)2(OH)2 + 2H

-----  
Ga+++ gl NaClO4 50°C 1.00M U TI 1969CTa (11504) 55

\*Ks(Ga(OH)3(s)+3H=Ga+3H2O)=3.7

\*Kso=2.8(75 C). In dilute soln. \*Kso=3.2(50 C), 2.2(75 C)

-----  
Ga+++ gl NaClO4 60°C 3.00M U 1969GAa (11505) 56

K=-1.7-11.55n

K: (3n+1)Ga + 8nH2O=Ga(Ga3(OH)8)n + 8nH

Ga+++	sp	oth/un	25°C	0.10M	U		1968NAd (11506)	57
						*K1=-2.9 *K2=-3.7 *K3=-4.4		
-----								
Ga+++	gl	NaClO4	25°C	0.30M	U		1968TSb (11507)	58
						*K1(Me2Ga) < -5.38 *K2(Me2Ga) < -8.82		
-----								
Ga+++	sol	NaClO4	60°C	3.00M	U		1967GSe (11508)	59
						*Kso(alpha-GaOOH(s)+3H)=3.66		
-----								
Ga+++	gl	KCl	25°C	3.00M	U		1967HCa (11509)	60
						B(40,100)=-213		
-----								
Ga+++	ISE	none	25°C	0.0	U		1967VLc (11510)	61
						B4=38.7		
-----								
Ga+++	dis	NaCl	20°C	1.00M	U		1965AKc (11511)	62
						*K1=-1.40 *K2=-1.75 *K3=-2.12		
-----								
Ga+++	dis	NaClO4	20°C	0.10M	U		1965SAh (11512)	63
						*K1=-0.44 *K2=-0.80 *K3=-1.05		
-----								
Ga+++	sol	none	25°C	0.0	U		1964PCa (11513)	64
						Kso=-39.10 *Kso=2.90 Ks(Ga(OH)3+OH)=0.33 *Ks(Ga(OH)3+2H=Ga(OH)+2H)=0.3 *Ks(Ga(OH)3+H=Ga(OH)2+H2O)=-3.15		
-----								
Ga+++	EMF	oth/un	20°C	var	U		1962INb (11514)	65
						*K(Ga(OH)3+H2O)=-6.85 K4=7.15		
-----								
Ga+++	oth	none	25°C	0.0	U		1958VPa (11515)	66
						*Kso=2.23(Ga2O3)		
-----								
Ga+++	vlt	none	20°C	0.0	U		1957K0d (11516)	67
						Kso(Ga(OH)3)=-34.0		
-----								
Ga+++	sol	oth/un	19°C	var	U		1952LAb (11517)	68
						Kso(Ga(OH)3)=-36.3 *Ks(Ga(OH)3+OH=Ga(OH)4)=-15		
-----								
Ga+++	sp	NaClO4	25°C	0.50M	U		1952WTa (11518)	69

\*K1(Ga+H2O=GaOH+H)=-2.92

-----  
Ga+++ gl oth/un 25°C var U T 1950MKa (11519) 70  
Kso(Ga(OH)3)=-35.15  
\*K1=-3.4

Kso=-36.0(10 C), -34.03(40 C)

-----  
Ga+++ gl none 18°C 0.0 U 1949LAc (11520) 71  
Kso(Ga(OH)3)=-36.5

-----  
Ga+++ gl oth/un 25°C dil U 19380Ka (11521) 72  
Kso(Ga(OH)3(s))=-35.4  
\*Ks(Ga(OH)3+OH)=-10.59

-----  
Ga+++ EMF none 18°C 0.0 C 1928FMa (11522) 73  
\*K1(Ga+H2O=GaOH+H)=-2.8  
\*K(GaOH+H2O=Ga(OH)2+H)=-3.5  
\*K(Ga(OH)4+H2O=Ga(OH)5)=-10.3  
\*K(Ga(OH)5+H2O=Ga(OH)6)=-11.7

Method: H electrode

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ con oth/un 25°C 0.06M U 1978RPa (13196) 74  
K(Ga+H2PO4)=3.07

-----  
Ga+++ ix NaClO4 25°C 1.00M U 1975MGa (13197) 75  
K(Ga+HL)=7.26  
K(Ga+H2L)=1.48

-----  
Ga+++ ix R4N.X ? 0.20M U 1974FGc (13198) 76  
K(2Ga+H2L=Ga2HL+2H)=-1.10

-----  
Ga+++ sol NaClO4 25°C 1.0M U 1964TCc (13199) 77  
Kso=-21.0

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

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp NaNO3 20°C 0.10M U I 1971BSm (13592) 78  
K(Ga+HL)=10.23

K(Ga+HL)=12.23(I=0)

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



-----  
Ga+++ cal none 25°C 0.0 U H K1=2.77 B2=5.06 1969IEa (16214) 90  
DH(K1)=19.7 kJ mol<sup>-1</sup>, DS=118.7 J K<sup>-1</sup> mol<sup>-1</sup>, DH(K2)=-7.2, DS=20.1  
-----

Ga+++ sp oth/un 30°C 0.0 U K1=2.99 1962NAc (16215) 91  
\*\*\*\*\*  
CH4O L Methyl alcohol CAS 67-56-1 (597)  
Methanol; CH3.OH  
-----

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

Ga+++ EMF alc/w 20°C 100% U K(Ga+H-1L)=10.2 1964GUa (17880) 92  
Method: H electrode. Medium: MeOH, 1.0 M Me4NCl  
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C2H2O4 H2L 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  
-----

Ga+++ gl NaClO4 20°C 0.10M U K1=9.20 1985SAa (18904) 93  
-----

Ga+++ sp NaClO4 20°C 1.00M U M K(Ga(NTA)+L)=4.38 1977ZKa (18905) 94  
-----

Ga+++ vlt NaClO4 25°C 1.00M U K1=7.06 1972MGf (18906) 95  
Method : amperometry  
-----

Ga+++ dis NaClO4 20°C 0.10M U B3=17.98 1963STc (18907) 96  
-----

Ga+++ gl KNO3 32°C 1.0M U K3=4.55 1957DSa (18908) 97  
-----

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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  
-----

Ga+++ gl NaCl 25°C 0.60M C K(Ga+HL=GaL+H)=-2.08 2002COa (19971) 98  
K(2Ga+HL+2H2O=Ga2(OH)2L+3H)=-5.65.  
-----

Ga+++ gl NaClO4 20°C 0.10M U K1=3.68 1985SAa (19972) 99  
\*\*\*\*\*

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  
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Ga+++ gl KNO3 25°C 0.50M M K1=11.20 B2=22.34 1984TZa (20321) 100  
B3=29.67  
B4=31.91

-----  
Ga+++ gl NaClO4 25°C 0.02M U T K1=11.75 B2=22.83 1976AMd (20322) 101  
K3=7.18

At 45 C, K1=11.48, K2=10.74, K3=7.48

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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

-----  
Ga+++ gl NaClO4 25°C 0.02M U T K1=3.39 B2=6.53 1976AMd (20543) 102  
2.67

At 45 C, K1=3.45, K2=3.20, K3=2.98

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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

-----  
Ga+++ gl NaClO4 20°C 0.10M U K1=9.71 1985SAa (21557) 103

-----  
Ga+++ gl KNO3 35°C 0.10M U M 1980KHb (21558) 104  
B(GaL(tripolyphosphate))=7.96

-----  
Ga+++ gl NaClO4 25°C 3.0M U K1=9.60 1975BHb (21559) 105  
K(Ga+HL)=2.11

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Ga+++ EMF KNO3 22°C 0.10M U K1=9.33 1968ZKb (21560) 106

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C2H5NO2 HL Acetohydroxamic CAS 546-88-3 (2766)  
Acetohydroxamic acid, N-Hydroxyacetamide; CH3.CO.NHOH

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

-----  
Ga+++ gl KCl 25°C 0.20M C K1=9.51 B2=18.42 1995FKa (21812) 107  
B3=26.21

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C2H7NS HL CAS 60-23-1 (588)  
2-Aminoethanethiol; H2N.CH2.CH2.SH

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

-----  
Ga+++ gl KCl 25°C 0.10M C K1=14.82 1995LMa (22491) 108  
B(GaHL)=18.49

-----  
Ga+++ dis NaClO4 20°C 1.00M U 1985MKc (22492) 109  
K(Ga+H2L)=1.90

K(Ga+HL)=5.50

Extraction by bis(2-ethylhexyl)phosphoric acid and TTA

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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
Ga+++	gl	NaNO3	25°C	0.10M	U			K1=12.72 K(GaL+OH)=6.70 K(GaH-1L+OH=GaH-2L)=6.33	1991DMb (23161)	110

\*\*\*\*\*

C2H8O7P2 H4L HEDPA CAS 2809-21-4 (436)  
1-Hydroxyethane-1,1-diphosphonic acid; CH3.C(OH)(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KNO3	25°C	0.10M	U			K1=18.52 K(GaL+H)=3.04 *K(GaL)=-5.00	1980MMd (23373)	111

Ga+++	sp	oth/un	20°C	dil	U			K1=19.50 K(Ga+HL)=11.43 K(Ga+H2L)=5.69	1971CAF (23374)	112
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C2H16N5O4Co HL (231)  
Pentaammineoxalatocobalt(III); Co(NH3)5(HC2O4)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	NaClO4	28°C	0.30M	U			K1=2.68	1974NDa (23474)	113

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	vlt	NaClO4	25°C	0.20M	C T H			K1=7.00 B2=12.46	1984MAb (24458)	114

Also data for 35 and 45 C. DH and DS values reported.

Ga+++	gl	oth/un	35°C	?	U			K3=2.67 B3=13.67	1958DBb (24459)	115
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\*\*\*\*\*

C3H6NO2Cl HL (8169)  
3-Chloroalanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KNO3	25°C	0.10M	C			K1=4.51 B2= 8.39	1981TMe (24760)	116

B3=10.34

Also data for the schiff based formed with pyridoxal.

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaClO4	25°C	0.02M	U	T		K1=11.60 B2=6.47	1976AMd (25144)	117
At 45 C, K1=12.02, K2=11.48, K3=7.25										

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaClO4	20°C	0.10M	U			K1=4.33	1985SAa (25446)	118
Ga+++	gl	NaClO4	25°C	0.02M	U	T		K1=3.28 B2=6.37 K3=2.92	1976AMd (25447)	119
At 45 C, K1=3.51, K2=3.26, K3=2.97										

\*\*\*\*\*

C3H7NO2 HL Alanine CAS 56-41-7 (86)  
2-Aminopropanoic acid; H2N.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KNO3	35°C	0.10M	U	M			1980KHb (26178)	120
B(GaL(tripolyphosphate))=8.94										

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaClO4	25°C	3.0M	C			K1=16.1 K(Ga+H2L)=2.4 K(Ga+HL)=8.3	1976BHb (26781)	121

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaClO4	25°C	3.0M	C			K1=9.0 K(Ga+HL)=1.8	1976BHb (27134)	122

\*\*\*\*\*

C3H8NO5P H3L 3-Phosphono-Ala CAS 20263-06-3 (1509)  
2-Amino-3-phosphonatopropanoic acid; (H2O3P)CH2.CH(NH2).COOH

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ga+++	gl	KCl	25°C	1.00M	C	M	K1=14.55 K(InL+H)=2.52	1985SMd (27351)	123
ternary complexes with pyridoxal-5'-phosporic acid									
*****									
C3H8N05P		H3L					CAS 23052-80-4	(1508)	
3-Amino-3-phosphonatopropanoic acid; (H2O3P)(NH2)CH.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ga+++	gl	KCl	25°C	1.00M	C		K1=13.37 K(GaL+H)=2.91	1989MSb (27362)	124
*****									
C3H8N06P		H3L					Phosphoserine CAS 17885-08-4	(1865)	
Serine dihydrogenphosphate, O-Phosphoserine; NH2.CH(CH2.OP03H2).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ga+++	gl	KNO3	25°C	0.10M	C		K1=6.18 B2= 9.87	1981TMe (27469)	125
*****									
C3H9NS		HL					CAS 462-47-5	(1566)	
3-Aminopropane-1-thiol; H2N.CH2.CH2.CH2.SH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ga+++	dis	NaClO4	20°C	1.00M	U		K(Ga+H2L)=2.90 K(Ga+HL)=7.20	1985MKc (27953)	126
Extraction by bis(2-ethylhexyl)phosphoric acid and TTA									
*****									
C3H11N06P2		H4L					(6772)		
(Dimethylamino)-N-methylenediphosphonic acid; (CH3)2N.CH(PO3H2)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ga+++	gl	NaNO3	24°C	0.20M	C		K1=25.8 B2=33.7 K(GaL+H)=1.5 K(GaHL+H)=1.5 K(GaH2L2+H)=5.4 K(GaH3L2+H)=4.0	1993BRa (28411)	127
K(GaH4L2+H)=2.0, K(GaH5L2+H)=2.0									
*****									
C4H6O4S		H3L					Thiomalic acid CAS 70-49-5	(109)	
2-Mercaptosuccinic acid, 2-Sulfanyl-1,4-butanedioic acid; HOOC.CH(SH).CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ga+++	gl	NaClO4	25°C	0.02M	U	T	K1=13.08 B2=20.60	1976AMd (30333)	128
At 45 C, K1=14.41, K2=8.52									

\*\*\*\*\*

C4H6O5 H2L Malic acid CAS 617-48-1 (393)  
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOC.CH2.CH(OH).COOH

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

Ga+++ gl NaClO4 25°C 0.02M U T K1=5.87 B2=9.94 1976AMd (30631) 129  
K3=3.04

At 45 C, K1=6.19, K2=4.36, K3=2.96

\*\*\*\*\*

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

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

Ga+++ gl NaClO4 20°C 0.10M U 1985SAa (31256) 130  
B(GaH-1L)=4.10  
K(Ga+H-1L)=18.50

Ga+++ dis NaClO4 25°C 1.00M U K1=5.55 B2=9.33 1975KLb (31257) 131  
K(Ga+2HL)=5.23

Ga+++ oth oth/un 25°C 1.00M U K1=4.93 1972GMc (31258) 132  
K(Ga+HL)=2.44  
K(Ga+H2L)=1.23

Method is amperometry

-----  
Ga+++ EMF oth/un 25°C 1.00M U K1=4.93 1972GMc (31259) 133  
K(Ga+HL)=2.45

-----  
Ga+++ dis NaClO4 20°C 0.10M U B2=9.76 1963STc (31260) 134

\*\*\*\*\*

C4H7N04 H2L Aspartic acid CAS 56-84-8 (21)  
Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH

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

Ga+++ gl KNO3 35°C 0.10M U M 1980KHb (31857) 135  
B(GaHL(tripolyphosphate))=8.31

Ga+++ gl NaClO4 25°C 0.02M U T K1=3.28 B2=6.18 1976AMd (31858) 136  
K3=2.84

At 45 C, K1=3.55, K2=3.23, K3=3.03 (ligand may be HL, not L ?)

-----  
Ga+++ EMF KNO3 22°C 0.10M U K1=11.17 1968ZKb (31859) 137

\*\*\*\*\*

C4H7N04 H2L IDA CAS 142-73-4 (118)  
Iminodiethanoic acid; HN(CH2.COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++     gl  KCl    25°C 0.10M U      K1=9.12  B2=16.72  1993LMc (36755) 153
*****
C5H5NO3           H2L                CAS 99110-85-7 (2195)
1,4-Dihydroxy-2-pyridinone;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++     gl  KCl    25°C 0.10M C      B2=22.48      1992CMc (36844) 154
                    B3=25.96
                    B(GaHL)=17.7
                    B(GaH2L)=29.00
                    B(GaH2L2)=34.25

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B(GaHL3)=29.53
*****
C5H8O2           HL  Acetylacetone   CAS 123-54-6 (164)
Pentane-2,4-dione; CH3.CO.CH2.CO.CH3
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++     vlt diox/w 25°C  5% C T H   K1=9.87  B2=18.23  1984MAb (37976) 155
Medium: 5% dioxane/H2O, 0.20 M NaClO4. Also data for 35 and 45 C.
DH and DS values reported.
-----

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Ga+++     gl  oth/un 30°C  0.0 U      K1=9.5   B2=17.90  1955IFa (37977) 156
                    K3=5.7
*****
C5H9NO2           HL  Proline          CAS 147-85-3 (44)
Pyrrolidine-2-carboxylic acid; C4H8N.CO0H
-----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++     gl  KNO3   35°C 0.10M U   M          1980KHb (38615) 157
                    B(GaL(tripolyphosphate))=8.53
*****
C5H9NO3           HL  Hydroxyproline   CAS 51-35-4 (416)
4-Hydroxy-2-pyrrolidinedicarboxylic acid; C4H7N(OH)(CO0H)
-----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++     gl  KNO3   35°C 0.10M U   M          1980KHb (38732) 158
                    B(GaL(tripolyphosphate))=7.55
*****
C5H9NO4           H2L  Glutamic acid    CAS 56-86-0 (22)
2-Aminopentanedioic acid; H2N.CH(CH2.CH2.CO0H)CO0H
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----

```

Ga+++ gl KNO3 35°C 0.10M U M 1980KHb (39084) 159  
B(GaHL(tripolyphosphate))=7.99

-----  
Ga+++ gl NaClO4 25°C 3.0M C K1=11.30 1976BHb (39085) 160  
K(Ga+HL)=4.30  
K(Ga+H2L)=2.30

-----  
Ga+++ EMF KNO3 22°C 0.10M U K1=11.15 1968ZKb (39086) 161  
\*\*\*\*\*  
C5H10N07P H4L PMIDA CAS 5994-61-6 (2433)  
N-(Phosphonomethyl)iminodiethanoic acid; H2O3P.CH2.N(CH2.COOH)2

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

-----  
Ga+++ gl KNO3 25°C 0.10M U K1=19.50 1980MMd (39675) 162  
K(GaL+H)=3.10  
\*K(GaL)=-5.95

\*\*\*\*\*  
C5H10N2O4 HL CAS 1955-67-5 (6736)  
2-Aminopentanoic-5-hydroxamic acid; HOOC.CH(NH2).CH2.CH2.CO.NOH

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

-----  
Ga+++ gl KCl 25°C 0.20M C B2=24.2 1995FKa (40080) 163  
B(GaHL)=18.5  
B(GaH2L2)=35.0  
B(GaHL2)=30.8

\*\*\*\*\*  
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

-----  
Ga+++ gl KNO3 35°C 0.10M U M 1980KHb (40708) 164  
B(GaL(tripolyphosphate))=7.96

-----  
Ga+++ gl KNO3 22°C 0.10M U K1=9.02 1968ZKb (40709) 165  
\*\*\*\*\*  
C5H11NO2S HL Methionine CAS 63-68-3 (42)  
2-Amino-4-(methylthio)butanoic acid; H2N.CH(CH2.CH2.S.CH3)COOH

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

-----  
Ga+++ gl NaClO4 25°C 3.0M C K1=8.9 1976BHb (41095) 166  
K(Ga+HL)=1.8

\*\*\*\*\*  
C6H5NCl2 L Dichloroaniline CAS 608-27-5 (762)  
2,3-Dichloroaniline; H2N.C6H3(Cl)2

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

-----  
Ga+++ sp diox/w 25°C 100% U 1976BSa (42343) 167  
K(GaCl3+L)=0.73

\*\*\*\*\*  
C6H5NC12 L Dichloroaniline CAS 554-00-7 (761)  
2,4-Dichloroaniline; H2N.C6H3(Cl)2  
-----

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

Ga+++ sp diox/w 25°C 100% U 1976BSa (42348) 168  
K(GaCl3+L)=1.08

\*\*\*\*\*  
C6H5NC12 L Dichloroaniline CAS 95-76-1 (759)  
3,4-Dichloroaniline; H2N.C6H3(Cl)2  
-----

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

Ga+++ sp diox/w 25°C 100% U T H 1976BSa (42353) 169  
K(GaCl3+L)=2.33

At 10 - 50 C. DH = -22.5 kJ mol-1; DS = -31.3 J K-1 mol-1.  
\*\*\*\*\*  
C6H5NC12 L Dichloroaniline CAS 626-43-7 (760)  
3,5-Dichloroaniline; H2N.C6H3(Cl)2  
-----

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

Ga+++ sp diox/w 25°C 100% U T H 1976BSa (42357) 170  
K(GaCl3+L)=1.69

At 10-50 C. DH = -21.7 kJ mol-1; DS = -40.9 J K-1 mol-1.  
\*\*\*\*\*  
C6H5NO3 H2L CAS 609-71-2 (5910)  
2-Hydroxypyridine-3-carboxylic acid;  
-----

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

Ga+++ gl NaCl 25°C 0.16M C 1998S0b (42723) 171  
K(Ga+HL)=6.78

K(Ga+2HL)=12.43  
K(Ga+3HL)=16.20  
\*\*\*\*\*  
C6H5NO3 H2L CAS 874-24-8 (4356)  
3-Hydroxypyridine-2-carboxylic acid; C5H3N.(OH)(COOH)  
-----

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

Ga+++ gl NaCl 25°C 0.16M C 1998S0b (42750) 172  
K(Ga+HL)=7.04

K(Ga+2HL)=13.09  
K(Ga+3HL)=17.74  
\*\*\*\*\*

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

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

Ga+++ sp NaClO4 25°C 0.10M C 2000MAa (42806) 173  
K(Ga+H2L=GaL+2H)=-1.47

Medium: LiClO4.

\*\*\*\*\*

C6H5N2O2Cl L CAS 635-22-3 (763)  
3-Nitro-4-chloroaniline; H2N.C6H3(Cl)(NO2)

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

Ga+++ sp diox/w 25°C 100% U T H 1976BSa (42978) 174  
K(GaCl3+L)=1.42

At 10 - 50 C. DH = -21.3 kJ mol<sup>-1</sup>; DS = -44.3 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C6H6NBr L 3-Bromoaniline CAS 591-19-5 (758)  
3-Bromoaniline; H2N.C6H4.Br

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

Ga+++ sp diox/w 25°C 100% U T H 1976BSa (43176) 175  
K(GaCl3+L)=2.85

At 10 - 50 C. DH = -27.6 kJ mol<sup>-1</sup>; DS = -38.4 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C6H6N2O2 L m-Nitroaniline CAS 99-09-2 (464)  
3-Nitroaminobenzene; H2N.C6H4.NO2

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

Ga+++ sp diox/w 25°C 100% U T H 1976BSa (43388) 176  
K(GaCl3+L)=2.01

At 10 -50 C. DH = -24.6 kJ mol<sup>-1</sup>; DS = -44.3 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

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  
-----

Ga+++ gl KNO3 22°C 0.10M U K1=18.88 1968ZKb (43760) 177

Ga+++ vlt KCl ? 0.10M U 1966ZKa (43761) 178  
K(Ga+2H2L=GaL2+4H)=4.84 (?)

\*\*\*\*\*

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  
-----

-----  
Ga+++ gl NaCl04 25°C 0.20M U T K1=16.86 B2=31.14 1981AMa (43959) 179  
K3=6.05

Temp range 25-45. K1 at 45 C =16.50; K2 at 45 C =14.08

\*\*\*\*\*

C6H6O3 HL Isomaltol CAS 3420-59-5 (5885)

1-(3-Hydroxy-2-furanyl)ethanone;

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

Ga+++ gl NaCl 25°C 0.15M C K1=6.63 B2=12.31 1989LCa (44033) 180  
K3=4.05

\*\*\*\*\*

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

4,5-Dihydroxybenzene-1,3-disulfonic acid; (HO)2.C6H2(SO3H)2

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

Ga+++ sp NaCl04 25°C 0.50M U T 1984YIa (44444) 181  
K(Ga+H2L=GaL+2H)=-1.182

-----  
Ga+++ gl KNO3 25°C 0.10M U K1=19.24 B2=34.90 1980LMb (44445) 182  
K3=10.70

-----  
Ga+++ gl NaCl04 25°C 0.10M U K1=19.26 1972GKc (44446) 183

-----  
Ga+++ gl oth/un 25°C 0.20M U K1=18.4 B2=33.90 1968ASa (44447) 184

-----  
Ga+++ sp oth/un 23°C 0.20M U TIH K1=4.51 1965DAa (44448) 185

K1=5.24(I=0),4.97(I=0.02),4.80(I=0.05),4.65(I=0.1). At I=0.1 M: K1=4.63(17C)

4.72(40 C); at 25 C: DH(K1)=-1.6 kJ mol<sup>-1</sup>, DS=88 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C6H7NO2 HL CAS 19365-01-6 (6771)

1-Methyl-3-hydroxy-2-pyridinone;

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

Ga+++ gl KCl 25°C 0.10M C K1=11.2 B2=21.10 1992CMc (45027) 186  
B3=29.66

\*\*\*\*\*

C6H7NO2 HL CAS 17184-19-9 (5888)

3-Hydroxy-2-methylpyridin-4(1H)-one;

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

Ga+++ gl NaCl 25°C 0.15M M K1=18.19 B2=29.51 1990CLa (45050) 187  
B3=37.96

\*\*\*\*\*

C6H8N2 L 2-Picolylamine CAS 29722-36-9 (502)

2-(Aminomethyl)pyridine; C5H4N.CH2NH2

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++      gl  NaNO3  25°C 0.10M U          K1=8.40   B2=15.98  1991DMb (45355) 188
                                         K3=4.86

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

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++      gl  NaClO4 20°C 0.10M U          B(GaH-1L)=6.07
                                         K(Ga+H-1L)=22.07

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-----
Ga+++      gl  KNO3   25°C 0.10M C          K1=10.02   1976HMd (46115) 190
                                         K(GaL(OH)+H)=2.9

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Ga+++      EMF NaClO4 25°C 1.0M C          K1=7.96    1975KBc (46116) 191
                                         K(Ga+OH+L)=9.21

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*****
C6H9NO6          H3L   NTA              CAS 139-13-9 (191)
Nitrilotriethanoic acid; N(CH2.COOH)3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++      gl  KNO3   25°C 0.10M C          K1=16.20   1976HMd (46825) 192
                                         K(GaL(OH)+H)=4.27
                                         K(GaL(OH)2+H)=7.64

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-----
Ga+++      sp  oth/un 20°C   ?  U          K1=17.7    1969CAAd (46826) 193

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-----
Ga+++      vlt KNO3   22°C 0.10M U          T K1=13.95  1968ZKb (46827) 194

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-----
Ga+++      EMF NaClO4 20°C 0.10M U          T K1=13.6   1967BAc (46828) 195

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Ga+++      dis NaClO4 20°C 0.10M U          B2=25.81   1963STc (46829) 196

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*****
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
-----
Ga+++      gl  KNO3   25°C 0.10M C          K1=11.33   1976HMd (48733) 197
                                         K(GaL(OH)+H)=3.25
                                         K(GaL(OH)2+H)=5.48

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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
-----

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\*\*\*\*\*

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
Ga+++	gl	KCl	25°C	0.10M	C			K1=16.5 B2=25.7 B(GaHL)=19.4 *K(GaL2)=-7.4 *K(GaH-1L2)=-8.7 *K(GaH-2L2)=-9.5	1993HGa (51451)	204

\*K(GaH-3L2)=-9.5, \*K(GaH-4L2)=-11.6

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	NaCl04	20°C	1.00M	U			K(Ga+H5L)=10.78 K(Ga+H3L)=15.84	1985KVa (52334)	205

Ga+++	dis	NaCl04	20°C	1.00M	U			K(Ga+H5L)=11.4	1983KDd (52335)	206
-------	-----	--------	------	-------	---	--	--	----------------	-----------------	-----

Ga+++	gl	KNO3	25°C	0.10M	U			K1=31.83 K(GaL+H)=6.65 K(GaHL+H)=5.10 K(GaH2L+H)=3.29 K(GaH3L+H)=2.46	1980MMd (52336)	207
-------	----	------	------	-------	---	--	--	---	-----------------	-----

\*K(GaL)=-10.06.

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	vlt	NaCl04	25°C	0.20M	C T H			K1=7.24 B2=14.12	1984MAb (52479)	208

Also data for 35 and 45 C. DH and DS values reported.

Ga+++	sp	NaCl04	25°C	0.20M	C			K(Ga+HL=GaL+H)=1.41	1982CSb (52480)	209
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\*\*\*\*\*

C7H5NO5 H2L Nitrosalicylic CAS 96-97-9 (148)  
2-Hydroxy-5-nitrobenzoic acid; HO.C6H3(NO2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	NaCl04	25°C	0.20M	C			K(Ga+HL=GaL+H)=1.40	1982CSb (53049)	210

K(Ga+HL)=1.94

-----  
Ga+++ sp oth/un 25°C 0.10M U 1980PSa (53050) 211

K(Ga+HL=GaL+H)=1.69

K(Ga+HL)=2.70

\*\*\*\*\*

C7H5O3Cl H2L CAS 321-14-2 (1113)

5-Chlorosalicylic acid; Cl.C6H3(OH).COOH

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

-----  
Ga+++ sp NaCl04 25°C 0.20M C T 1982CSb (53344) 212

K(Ga+HL=GaL+H)=0.77

K(Ga+HL)=1.72

\*\*\*\*\*

C7H6O2S H2L Thiosalicylic CAS 147-93-3 (236)

2-Mercaptobenzoic acid; HS.C6H4.COOH

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

-----  
Ga+++ gl alc/w 25°C 50% M K1=10.3 B2=20.92 1984TZa (53906) 213

\*\*\*\*\*

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

-----  
Ga+++ gl NaCl04 20°C 0.10M U K1=16.10 1985SAa (54219) 214

-----  
Ga+++ vlt NaCl04 25°C 0.20M C T H 1984MAb (54220) 215

K(Ga+HL)=3.16

K(GaHL+HL)=3.00

Also data for 35 and 45 C. DH and DS values reported.

-----  
Ga+++ sp NaCl04 25°C 0.20M C T 1982CSb (54221) 216

K(Ga+HL=GaL+H)=0.73

K(Ga+HL)=1.98

-----  
Ga+++ kin NaCl04 25°C 0.10M U 1977PSa (54222) 217

K(Ga+HL)=0.72

K(Ga(OH)+H2L=GaL+H)=-0.5

K(Ga(OH)+HL=GaL)=0.3

K(Ga(OH)2+H2L=GaL)=-0.5

-----  
Ga+++ sp NaCl04 30°C 0.20M U I 1963DNa (54223) 218

K(Ga+HL=GaL+H)=0.47

K=1.04(I=0.02),0.74(I=0.05),0.62(I=0.1). Recalculated values. At I=0.05 M:

K=0.62, 0.69(29 C), 0.80(40 C). DH=15.5 kJ mol<sup>-1</sup>, DS=38 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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
-----
Ga+++      gl  NaClO4 25°C 0.20M U T      K1=9.59  B2=17.89  1981AMa (54528) 219
                                   K3=7.31
Temp range 25-45. K1 at 45 C = 9.14; K2 at 45 C = 8.18
*****
C7H6O4      H3L  Protocatechuic  CAS 99-50-3 (875)
3,4-Dihydroxybenzoic acid; C6H3(OH)2.COOH
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++      gl  NaClO4 25°C 0.20M U T      K1=10.40 B2=17.96  1981AMa (54675) 220
                                   K3=6.45
Temp range 25-45. K1 at 45 C =10.79; K2 at 45 C = 7.76
*****
C7H6O5      H4L  Gallic acid      CAS 149-91-7 (446)
3,4,5-Trihydroxybenzoic acid; C6H2(OH)3.COOH
-----
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++      gl  NaClO4 25°C 0.20M U T      K1=18.43 B2=30.17  1981AMa (54752) 221
                                   K3=7.59
Temp range 25-45. K1 at 45 C =19.66; K2 at 45 C =12.36
*****
C7H6O6S     H3L                               CAS 5965-83-3 (399)
5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; H03S.C6H3(OH).COOH
-----
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ga+++      ix  NaCl    20°C 1.0M C      K1=11.73      1989DOa (55004) 222
                                   K(Ga+HL)=2.28
-----
Ga+++      gl  NaClO4 20°C 0.10M U      K1=12.70      1985SAa (55005) 223
-----
Ga+++      gl  KNO3   25°C 0.10M U      K1=12.50  B2=22.50  1980LMb (55006) 224
-----
Ga+++      gl  NaNO3  25°C 0.20M U      K1=12.55  B2=22.70  1968ASa (55007) 225
-----
Ga+++      sp  NaClO4 29°C 0.20M U  IH      1963NAa (55008) 226
                                   K(Ga+HL=GaL+H)=0.98
K=1.61(I=0.02),1.48(I=0.05),1.20(I=0.10). Recalculated values. In 0.05 M
NaClO4: K=1.32(20 C),1.39(29 C),1.52(40 C). DH=17.8 kJ mol-1
*****
C7H7NO2     HL  Anthranilic      CAS 118-92-3 (1589)
2-Aminobenzoic acid, Anthranilic acid; H2N.C6H4.COOH
-----
```

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

Ga+++ vlt NaClO4 25°C 0.20M C T K1=4.03 1984MAb (55225) 227

Also data for 35 and 45 C.

\*\*\*\*\*

C7H7NO2 HL CAS 495-18-1 (184)

Benzohydroxamic acid; C6H5.CO.NH.OH

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

Ga+++ gl NaClO4 25°C 3.0M U K1=9.2 B2=18.00 1977BHa (55501) 228  
B3=25.3

Additional method: spectrophotometry.

\*\*\*\*\*

C7H7NS L Thiobenzamide CAS 2227-79-4 (1660)

Thiobenzamide; C6H5.CS.NH2

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

Ga+++ sp non-aq 25°C 100% U K(GaCl3+L)=2.32 1977SWa (55704) 229

Medium: Et2O

\*\*\*\*\*

C7H8N2O2 L CAS 99-52-5 (470)

2-Methyl-4-nitro-aminobenzene; CH3.C6H3(NO2).NH2

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

Ga+++ sp diox/w 25°C 100% U T H K(GaCl3+L)=1.27 1976BSa (55881) 230

At 10 - 50 C. DH = -15.9 kJ mol<sup>-1</sup>; DS = -28.8 kJ mol<sup>-1</sup>.

\*\*\*\*\*

C7H8N2O2 L CAS 119-32-4 (467)

3-Nitro-4-methylaminobenzene; CH3.C6H3(NO2).NH2

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

Ga+++ sp diox/w 25°C 100% U T H K(GaCl3+L)=2.45 1976BSa (55904) 231

At 10 -50 C. DH = -20.9 kJ mol<sup>-1</sup>; DS = -23.4 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C7H9NO2 HL CAS 30652-11-0 (2458)

3-Hydroxy-1,2-dimethylpyridin-4(1H)-one; (OH)(CH3)(O:)C5H2N.CH3

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

Ga+++ gl KNO3 25°C 0.10M C K1=13.17 B2=25.43 2004SGc (56435) 232  
B3=35.76

Ga+++ gl KCl 25°C 0.10M C K1=13.17 B2=25.43 1994MRa (56436) 233  
K3=10.33  
-----

Ga+++ gl KCl 25°C 0.10M C K1=13.17 B2=25.43 1992Cmb (56437) 234  
K3=10.33

Ga+++ gl NaCl 25°C 0.15M M K1=17.07 B2=29.26 1990CLa (56438) 235  
B3=38.42

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

Ga+++ dis non-aq 25°C 100% C 1999YSa (58623) 236  
K(Ga+3HL=GaL3(org)+3H)=0.12

Medium: toluene. Method: distribution between 0.10 M NaClO4 and toluene.

K: Ga(aq)+3HL(org)=GaL3(org)+3H(aq)

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

Ga+++ EMF KNO3 22°C 0.10M U K1=5.15 1968ZKb (58970) 237

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

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

Ga+++ vlt NaClO4 25°C 0.20M C T K1=3.49 B2= 6.69 1984MAb (59832) 238  
Also data for 35 and 45 C.

\*\*\*\*\*  
C8H9NO2 L CAS 1849-49-6 (5907)  
5'-Deoxypyridoxal

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

Ga+++ gl KCl 25°C 1.00M C K1=8.54 1989MSb (60247) 239

\*\*\*\*\*  
C8H9NO3 HL Pyridoxal CAS 65-22-5 (110)  
3-Hydroxy-5-(hydroxymethyl)-2-methyl-4-pyridinecarboxaldehyde;

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

Ga+++ gl KNO3 25°C 0.10M C K1=2.67 1981TMe (60427) 240

\*\*\*\*\*  
C8H10NO6P H3L Codecarboxylase CAS 41468-25-1 (2555)  
Pyridoxal-5-phosphoric acid;

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

Ga+++ gl KCl 25°C 1.00M C M K1=14.61 1985SMd (60703) 241  
K(GaL+H)=3.43

ternary complexes with 2-amino-3-phosphonopropionic acid

\*\*\*\*\*

C8H11N02 HL CAS 30652-12-1 (5889)  
3-Hydroxy-2-methyl-1-ethylpyridin-4-one;

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

Ga+++ gl NaCl 25°C 0.15M M K1=17.24 B2=29.31 1990CLa (61092) 242  
B3=38.19

\*\*\*\*\*

C8H16N2O4S2 H4L (6947)  
2,7-Dicarboxy-3,6-diaza-1,8-octanedithiol;  
HS.CH2.CH(COOH)NH.CH2CH2.NH.CH(COOH)CH2.SH

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

Ga+++ gl KCl 25°C 0.10M C K1=31.5 1996LMa (62548) 243  
B(GaHL)=35.89  
B(Ga(OH)L)=22.12  
B(Ga(OH)2)L=11.61

\*\*\*\*\*

C8H18N2O10P2 H6L EDDADPO CAS 2310-83-0 (2436)  
1,2-Diaminoethane-N,N'-diethanoic-N,N'-dimethylphosphonic acid;  
(-CH2.N(CH2.COOH)(CH2.PO3H2))2

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

Ga+++ gl KNO3 25°C 0.10M U K1=26.82 1980MMd (62901) 244  
K(GaL+H)=5.10  
K(GaHL+H)=2.24  
\*K(GaL)=-8.42

\*\*\*\*\*

C8H24N2O12P4S H8L CAS 33424-58-7 (2648)  
1,7-Diaza-4-thiaheptane-1,1,7,7-tetra(methylphosphonic acid);  
S(CH2.CH2.N(CH2.PO3H2)2)2

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

Ga+++ dis NaClO4 20°C 1.00M U K(Ga+H5L)=10.3 1983KDd (63485) 245

\*\*\*\*\*

C8H24N2O13P4 H8L CAS 25007-19-4 (2647)  
1,7-Diaza-4-oxaheptane-1,1,7,7-tetra(methylphosphonic acid);  
O(CH2.CH2.N(CH2.PO3H2)2)2

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

Ga+++ dis NaClO4 20°C 1.00M U 1983KDd (63493) 246

K(Ga+H5L)=10.3

\*\*\*\*\*  
C9H6NOF HL CAS 387-97-3 (3283)  
5-Fluoro-8-hydroxyquinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp NaClO4 25°C 0.10M C K1=12.35 1998JHa (63674) 247  
By 19F nmr in 20% v/v D2O/H2O, 0.10 M NaClO4, K1=12.6, B2=24.1,  
B3=34.3

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

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ oth oth/un 20°C 0.20M U K1=13.6 1972ABb (63696) 248  
Acetate buffer. pH=4

\*\*\*\*\*  
C9H6NO4ClS H2L CAS 3062-36-0 (3888)  
7-Chloro-8-hydroxyquinoline-5-sulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ oth oth/un 20°C 0.20M U K1=13.5 1972ABb (63715) 249  
Acetate buffer. pH= 4

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

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ gl KNO3 25°C 0.10M U K1=14.7 B2=23.9 1974MOa (63800) 250  
B3=29.6  
B(Ga(OH)2L)=32.3  
B(Ga(OH)L2)=31.0  
K(Ga+HL)=11.3

-----  
Ga+++ sp oth/un ? dil U K1=12.6 1971BRf (63801) 251  
\*\*\*\*\*  
C9H7NO HL Oxine CAS 148-24-3 (504)  
8-Hydroxyquinoline (8-quinolinol);

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ gl NaClO4 20°C 0.10M U K1=12.31 1985SAa (64270) 252  
-----  
Ga+++ gl diox/w 25°C 50% U K1=15.67 B2=29.09 1978THc (64271) 253  
B3=41.6  
-----

Ga+++ sp alc/w ? 20% U 1971BRf (64272) 254  
B3=32.97

Medium: 20% EtOH

-----  
Ga+++ dis NaCl04 20°C 0.10M U K1=14.51 B2=28.01 1965SAf (64273) 255  
K3=12.49

-----  
Ga+++ oth none ? 0.0 U 1957PKa (64274) 256  
Kso=-32.06

\*\*\*\*\*  
C9H7N03S2 H2L CAS 58447-10-2 (4675)  
8-Mercaptoquinoline-5-sulfonic acid;

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

-----  
Ga+++ sp oth/un ? ? U K1=10.0 B2=19.50 1968ABa (64424) 257

\*\*\*\*\*  
C9H7N04S H2L Sulfoxine CAS 84-88-8 (448)  
8-Hydroxyquinoline-5-sulfonic acid;

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

-----  
Ga+++ gl KNO3 25°C 0.10M U K1=11.97 B2=23.44 1980LMb (64544) 258  
K3=9.95

-----  
Ga+++ sp oth/un ? ? U K1=13.3 B2=24.50 1973BIb (64545) 259

\*\*\*\*\*  
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

-----  
Ga+++ sp NaCl04 ? 0.10M U K1=12.8 1969HSd (64705) 260  
K(Ga+HL)=9.1

-----  
Ga+++ sp alc/w 25°C 50% U 1967NPb (64706) 261  
K(Ga+HL)=12.0

Medium: 50% MeOH, 0.1 M NaCl04

\*\*\*\*\*  
C9H8N2O3S H2L CAS 148292-08-4 (7219)  
Nordesferriferrithiocin; (HO)C5NH3.C3NSH3(COOH)

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

-----  
Ga+++ sp KCl 25°C 0.10M C B2=27.8 1996LHa (64816) 262

\*\*\*\*\*  
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

-----  
Ga+++ gl KNO3 35°C 0.10M U M 1980KHb (65939) 263  
B(GaL(tripolyphosphate))=7.21

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

Ga+++ gl KNO3 35°C 0.10M U M 1980KHb (66220) 264  
B(GaHL(tripolyphosphate))=7.62

-----  
Ga+++ gl NaClO4 25°C 3.0M C 1976BHb (66221) 265  
K(Ga+HL)=8.7  
K(Ga+H2L)=2.3

\*\*\*\*\*  
C9H11NO4 HL CAS 95215-59-1 (8724)  
1-(2'-Carboxyethyl)-2-methyl-3-hydroxy-4-pyridinone;  
-----

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

Ga+++ gl KNO3 25°C 0.10M C K1=16.84 B2=29.02 2002SGb (66304) 266  
B3=37.77  
B(GaHL2)=32.27  
B(GaH2L2)=35.15

\*\*\*\*\*  
C9H11NO6S H3L CAS 73487-23-7 (5467)  
N,N-Dimethyl-2,3-dihydroxy-5-sulfonatobenzamide; HS03.C6H2(OH)2.CONMe2  
-----

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

Ga+++ gl KNO3 25°C 0.10M U K1=15.5 B2=29 1982PWa (66463) 267  
B3=30

\*\*\*\*\*  
C9H13NO2 L (7151)  
1,2-Diethyl-3-hydroxy-4-pyridinone  
-----

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

Ga+++ gl KCl 25°C 0.10M C K1=14.58 B2=26.21 1994MRa (66795) 268  
K3=9.84

\*\*\*\*\*  
C9H15NO7P2 H2L HBIDPO CAS 73199-04-9 (2434)  
(2-Hydroxybenzyl)iminobis(methylenephosphonic) acid; HO.C6H4.CH2.N(CH2.PO3H2)2  
-----

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

Ga+++ gl KNO3 25°C 0.10M U K1=23.78 1980MMd (67474) 269  
K(GaL+H)=5.60  
K(GaHL+H)=3.30

\*K(GaL)=-6.95

\*\*\*\*\*  
C9H24N3O9P3                    H6L        NOTPH                    CAS 83843-39-3 (224)  
1,4,7-Triazacyclononane-N,N',N''-tris(methylenephosphonic acid);

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

Ga+++            gl    KNO3    25°C 1.00M U                    K1=30.2            1990BSd (68320) 270

\*\*\*\*\*  
C9H28N3O15P5                    10L        DTPPH                    CAS 15827-60-8 (2921)  
Diethylenetriamine-N,N,N',N'',N''-penta(methylphosphonic acid);  
H2O3PCH2.N(CH2CH2.N(CH2PO3H2)2)2 H

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

Ga+++            sp    NaClO4 20°C 1.00M U                    1985KVa (68409) 271

K(Ga+H6L)=6.64

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

Ga+++            vlt    NaClO4 25°C 0.20M C T                    K1=6.28            1984MAb (69010) 272

Also data for 35 and 45 C.

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

Ga+++            ISE oth/un 25°C 1.0M U                    K1=4.54    B2=7.71    1972KMf (69576) 273

Medium: 1.0 M sodium acetate. Mixed complexes with acetate ion likely.

By spectrophotometry: K1=4.49, B2=7.69

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

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

Ga+++            gl    NaClO4 25°C 0.20M U T                    K1=17.67    B2=31.93    1981AMa (69846) 274

K3=9.41

Temp range 25-45. K1 at 45 C = 17.06; K2 at 45 C =13.84

\*\*\*\*\*  
C10H8O8S2                                    H4L        Chromotropic ac        CAS 148-25-4 (1875)  
1,8-Dihydroxynaphthalene-3,6-disulfonic acid;

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

Ga+++            gl    KNO3    25°C 0.10M U                    K1=15.62    B2=28.12    1980LMb (69950) 275

-----  
 Ga+++ gl NaNO3 25°C 0.20M U K1=17.80 B2=31.40 1968ASa (69951) 276  
 \*\*\*\*\*  
 C10H9NO3S2 HL (7206)  
 6-Methyl-5-sulfo-8-mercaptoquinoline;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ sp oth/un 20°C 0.10M U K1=10.4 B2=20.30 1985DAb (70176) 277  
 \*\*\*\*\*  
 C10H10N2O3S H2L CAS 76045-30-2 (7218)  
 Desferriferrithiocin,  
 2-(3-Hydroxypyridin-2-yl)-4-methyl-4,5-dihydrothiazole-4-carboxylic acid;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ sp KCl 25°C 0.10M C B2=29.2 1996LHa (70562) 278  
 \*\*\*\*\*  
 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  
 -----  
 Ga+++ vlt diox/w 25°C 5% C T H K1=9.86 B2=18.72 1984MAb (70730) 279  
 Medium: 5% dioxane/H2O, 0.20 M NaClO4. Also data for 35 and 45 C.  
 DH and DS values reported.  
 \*\*\*\*\*  
 C10H13NO4 HL CAS 137528-47-3 (8725)  
 1-(3'-Carboxypropyl)-2-methyl-3-hydroxy-4-pyridinone;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ gl KNO3 25°C 0.10M C K1=16.54 B2=28.20 2002SGB (71757) 280  
 B3=36.19  
 B(GaHL2)=32.02  
 \*\*\*\*\*  
 C10H16N2O8 H4L EDTA CAS 60-00-4 (120)  
 1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestric acid;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ EMF KNO3 25°C 0.10M C K1=22.01 1997DFa (73793) 281  
 K(GaL+H)=2.30  
 K(Ga(OH)L+H)=5.57  
 -----  
 Ga+++ gl KNO3 25°C 0.50M C M 1989TBa (73794) 282  
 K(GaL+H)=1.69  
 \*K(GaL)=-5.55  
 K(GaL+F)=1.9  
 K(GaL+S)=10.6

Ga+++	gl	KNO3	25°C	0.50M	C	M			1986TBa (73795)	283
									K(GaL+H)=1.69	
									*K(GaL)=-5.55	
									K(GaL+F)=1.9	
									K(Ga(OH)L+HS=GaLS)=10.6	
Ga+++	gl	NaClO4	20°C	0.10M	U			K1=20.90	1985SAa (73796)	284
Ga+++	gl	KNO3	35°C	0.10M	U			K1=20.04	1980KHb (73797)	285
Ga+++	gl	KNO3	25°C	0.10M	C			K1=21.7	1976HMd (73798)	286
									K(GaL+H)=1.7	
									K(GaL(OH)+H)=5.52	
Ga+++ pH=2	sp	NaClO4	20°C	0.01M	U			K1=21.7	1969CAe (73799)	287
Ga+++	EMF	NaClO4	20°C	0.10M	U			K1=21.1	1967BAc (73800)	288
									K(GaL+H)=1.83	
									K(GaL+OH)=8.36	
Ga+++	ISE	KNO3	20°C	0.10M	U			K1=20.5	1966Mca (73801)	289
									K(GaL+H)=1.91	
Ga+++	dis	NaClO4	20°C	0.10M	U				1963STc (73802)	290
									B(GaL(OH))=34.0	
Medium: KClO4										
Ga+++	gl	KNO3	15°C	0.10M	U			K1=20.25	1956STa (73803)	291
									K(GaL+H)=1.41	
									K(GaLOH+H)=5.92	
Ga+++	vlt	KNO3	20°C	0.10M	U			K1=20.27	1954SGa (73804)	292
*****										
C10H18N2O7                      H3L                      HEDTA                      CAS 150-39-0 (392)										
N-(Hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KNO3	35°C	0.10M	U			K1=18.72	1980KHb (75395)	293
Ga+++	gl	KNO3	25°C	0.10M	C			K1=17.2	1976HMd (75396)	294
									K(GaL(OH)+H)=4.38	
Ga+++	sp	NaClO4	25°C	0.10M	U			K1=19.4	1973NKa (75397)	295
Ga+++	ISE	KNO3	20°C	0.10M	U			K1=16.9	1966Mca (75398)	296
									K(GaL+H)=4.17	
*****										

C10H20N2O4S2 H4L EDDASS (6912)  
 N,N'-Bis(2-mercaptoethyl)diaminoethane-N,N'-diethanoic acid;  
 (-CH2.N(CH2.CH2.SH)CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KNO3	25°C	0.10M	C			K1=35.6 K(GaL+H)=2.4 K(Ga(OH)L+H)=11.1	1996SAb (75811)	297

Ga+++	gl	KCl	25°C	0.10M	C			K1=35.6 B(GaHL)=38.0 B(GaH-1L)=24.5	1995SMa (75812)	298
-------	----	-----	------	-------	---	--	--	---	-----------------	-----

Ga+++	gl	KCl	25°C	0.10M	C			K1=35.6 K(GaL+H)=2.4 K(GaL=Ga(OH)L+H)=-11.1	1995SMb (75813)	299
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\*\*\*\*\*

C10H22N2O3 L Cryptand 2,1 CAS 31249-95-3 (835)  
 4,7,13-Trioxa-1,10-diazacyclopentadecane (Trioxa(2,1)cryptand);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	R4N.X	25°C	0.05M	U			K1=12.7	1999BDb (76317)	300

Medium: Et4NClO4

\*\*\*\*\*

C10H24N2S2 H2L (7871)  
 N,N'-Bis(2,2-dimethyl-2-mercaptoethyl)diaminoethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KNO3	25°C	0.10M	C			K1=24.7 K(Ga(OH)L+H)=3.09 K(Ga(OH)2L+H)=11.3	1996SAb (76597)	301

\*\*\*\*\*

C11H8N6O7S2 H4L CAS 35322-95-7 (909)  
 3-Hydroxy-4-(1H-tetrazol-5-ylazo)-2,7-naphthalenedisulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaClO4	25°C	0.0	C	I		K(Ga+H2L=GaL+2H)=-0.75	1992PSb (76937)	302

Derived from data for 0.008-2.42 M NaClO4 media.

\*\*\*\*\*

C11H8N6O8S2 H5L CAS 74385-48-1 (897)  
 2-(1H-Tetrazol-5-ylazo)chromotropic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaClO4	25°C	0.0	C	I			1992PSb (76950)	303

$K(2Ga+H3L=Ga2(OH)L+4H)=-3.48$

$K(Ga+H3L=GaL+3H)=-6.06$

Derived from data for 0.085-2.32 M NaClO4 media.

\*\*\*\*\*

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

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ gl alc/w 35°C 70% U K1=7.26 B2=14.18 1988KRc (77200) 304

\*\*\*\*\*

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  
-----  
Ga+++ sp NaCl 25°C 0.15M C B2eff=10.3 1999XLa (77540) 305

Medium: 0.15 M NaCl plus phosphate buffer, pH 7.2.

-----  
Ga+++ sp NaClO4 25°C 0.80M U I B(Ga+H3L=GaHL+2H)=-0.51 1985MBa (77541) 306

Also data for 5-35% CH3CN, Me2SO and DMF and 5-50% CH3OH.

-----  
Ga+++ gl KCl 21°C 0.10M U K(Ga+HL)=8.34 1978KYb (77542) 307

-----  
Ga+++ sp oth/un 25°C 0.10M U B2=25.96 K(GaOH+L)=18.84 1972BNb (77543) 308

-----  
Ga+++ sp oth/un 25°C ? U K(?)=10.3 1966DMf (77544) 309

-----  
Ga+++ sp NaClO4 20°C 0.20M U B2=30.3 K(Ga+HL)=14.6 1963HSc (77545) 310

\*\*\*\*\*

C11H11N3O2S H2L (6578)  
4-(4'-Methyl-2'-thiazolylazo)-2-methyl-resorcinol; (OH)2(CH3)C6H2.N:N.C3HNS(CH3)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp NaNO3 rt 0.25M U K1=13.65 B(GaHL)=19.08 1990JJa (77919) 311

B(GaH2L2)=37.03

\*\*\*\*\*

C11H13NO5 H3L HBIDA CAS 7372-13-6 (1603)  
N-(2-Hydroxybenzyl)iminodiethanoic acid; HO.C6H4.CH2.N(CH2.COOH)2

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

Ga+++ gl KNO3 25°C 0.10M C K1=21.55 1976Hmd (78625) 312  
 K(GaL(OH)+H)=5.75  
 K(GaL(OH)2+H)=8.53

\*\*\*\*\*

C11H15N04 HL CAS 480436-59-7 (8726)  
 1-(4'-Carboxybutyl)-2-methyl-3-hydroxy-4-pyridinone;

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

Ga+++ gl KNO3 25°C 0.10M C K1=16.52 B2=28.33 2002SGb (79037) 313  
 B3=36.41  
 B(GaHL2)=32.44  
 B(GaH2L2)=35.02

\*\*\*\*\*

C11H17N2O6P HL (5908)  
 3(((3-Hydroxy-2,5-dimethyl-4-pyridinyl)methylene)amino)-3-phosphonopropanoic acid;

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

Ga+++ gl KCl 25°C 1.00M C K1=22.60 B2=36.28 1989MSb (79187) 314  
 K(GaL+H)=3.64  
 K(GaHL+H)=2.85  
 K(GaL2+H)=5.99  
 K(GaHL2+H)=5.83

K(MH2L2+H=MH3L2)=5.07, K(MH3L2+H=MH4L2)=4.37

\*\*\*\*\*

C11H18N2O8 H4L CAS 4408-81-5 (923)  
 1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.)2.CH2

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

Ga+++ EMF NaCl04 20°C 0.10M U K1=20.8 1967BAC (79444) 315  
 K(GaL+2OH)=10.7

\*\*\*\*\*

C11H20N2O10P2S H4L CAS 73199-05-0 (2440)  
 N-(2-Hydroxy-5-sulfobenzyl)ethylenediamine-N,N'bis(methylenephosphonic)

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

Ga+++ gl KNO3 25°C 0.10M U K1=31.55 1980MMd (79721) 316  
 K(GaL+H)=8.98  
 K(GaHL+H)=4.01  
 K(GaH2L+H)=2.82  
 \*K(GaL)=-10.36

\*\*\*\*\*

C11H24N2O2S2 H3L (7911)  
 1-Carboxy-N,N'-bis(2,2-dimethyl-2-mercaptoethyl)diaminoethane;

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

Ga+++ gl KNO3 25°C 0.10M C K1=27.37 1996SAb (79899) 317  
K(Ga(OH)L+H)=5.3

\*\*\*\*\*  
C12H8N2 L Phenanthroline CAS 66-71-7 (144)  
1,10-Phenanthroline;

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

Ga+++ ISE oth/un 25°C 1.0M U K1=5.58 B2=9.24 1972KMF (80456) 318  
Medium: acetate buffer

\*\*\*\*\*  
C12H9N2O5BrS H3L CAS 35495-39-7 (4965)  
1-(2'-Bromo-4',5'-dihydroxyphenyl)azobenzene-4-sulfonic acid;

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

Ga+++ sp oth/un ? ? U 19710Ya (80608) 319  
K(Ga+HL)=8.81  
K(Ga+2HL)=16.99

\*\*\*\*\*  
C12H10N2O2 H2L CAS 2050-14-8 (3378)  
2,2'-Dihydroxyazobenzene; HO.C6H4.N:N.C6H4.OH

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

Ga+++ sp KCl 25°C 0.10M U 1962KMa (80700) 320  
K(Ga+H2L=GaL+2H)=0.61  
K(GaL+H2L=GaL2+2H)=5.2(?)

\*\*\*\*\*  
C12H10N2O2 H2L CAS 2050-16-0 (2636)  
3,4-Dihydroxyazobenzene; C6H5.N:N.C6H3(OH)2

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

Ga+++ sp alc/w 20°C 20% U 1967NVa (80714) 321  
K(GaOH+2HL)=17.54

Medium: 20% EtOH, 0.1 M  
\*\*\*\*\*  
C12H10N2O3 H3L CAS 69323-27-9 (3971)  
2,2',4'-Trihydroxyazobenzene; HO.C6H4.N:N.C6H3(OH)2

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

Ga+++ sp oth/un 25°C 0.10M U 1967NNA (80721) 322  
K(Ga+HL)=15.66  
K(GaOH+2HL)=30.63

\*\*\*\*\*  
C12H10N2O5S H3L CAS 16432-90-9 (4955)  
3,4-Dihydroxyazobenzene-4'-sulfonic acid; (HO)2.C6H3.N:N.C6H4.SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	oth/un	20°C	0.10M	U				1967NVa (80732)	323
									K(GaOH+2HL)=18.19	

\*\*\*\*\*

C12H11NO2		L						CAS 49744-73-2	(1602)	
3-Hydroxy-2-methyl-1-phenyl-4-pyridone; (O)(CH3)(OH).C5H2N-C6H5										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaCl	25°C	0.15M	C			K1=17.5 B2=28.8	1991ZRa (80822)	324
									B3=36.3	
									B3(eff)=30.3	

B3(eff) in 0.15M NaCl, pH 7.4

\*\*\*\*\*

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
Ga+++	gl	KNO3	25°C	0.10M	C			K1=9.19 B2=17.47	1988YSc (81811)	325
									*****	
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
Ga+++	EMF	NaClO4	20°C	0.10M	U			K1=17.3	1967BAc (82457)	326
									K(GaL+H)=3.2	
									K(GaL+OH)=7.14	

\*\*\*\*\*

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
Ga+++	sp	none	19°C	0.0	U			K1=22.35	1971CAe (82535)	327
									K(Ga+HL)=14.55	

Ga+++	EMF	NaClO4	20°C	0.10M	U			K1=21.0	1967BAc (82536)	328
									K(GaL+H)=1.54	
									K(GaL+2OH)=11.9	

\*\*\*\*\*

C12H21N3O6		H3L			NOTA			(5589)		
1,4,7-Triazacyclononane-N,N',N"-triethanoic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KCl	25°C	0.10M	C			K1=30.98	1991CMd (82734)	329
									*K(GaL)=-9.70	

\*\*\*\*\*  
 C12H22O12 HL Lactobionic acid CAS 96-82-2 (2487)  
 4-O-Beta-D-Galactopyranosyl-D-gluconic acid;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ gl NaNO3 25°C 0.10M C 1995EOa (82930) 330  
 B(GaH-3L)=-8.95  
 B(GaH-4L)=-16.40

\*\*\*\*\*  
 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  
 -----  
 Ga+++ gl R4N.X 25°C 0.05M U K1=12.8 1999BDb (83840) 331  
 Medium: Et4NClO4

\*\*\*\*\*  
 C12H27N3O3 L (6685)  
 1,3,5-Trideoxy-1,3,5-tris(dimethylamino)-cis-inositol;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ gl KCl 25°C 0.10M C K1=16.74 B2=30.25 1995HKb (84071) 332  
 B(GaHL2)=34.57

Other models also considered., e.g. K1=16.62, B2=30.22, B(GaH-1L)12.53

\*\*\*\*\*  
 C12H27N3S3 HL TACN-TM (6952)  
 1,4,7-Tris(2-mercaptoethyl)-1,4,7-triazacyclononane;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ gl KCl 25°C 0.10M C K1=34.2 1995Mwa (84099) 333  
 B(GaHL)=43.8

\*\*\*\*\*  
 C13H9N3O7S3 H3L CAS 2172-27-2 (5007)  
 1-(2-Thiazolylazo)-2-naphthol-3,6-disulfonic acid;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ sp NaClO4 ? 0.10M U K1=8.20 1972BZa (84651) 334

\*\*\*\*\*  
 C13H10N2O4 H3L CAS 18924-02-2 (4012)  
 2-Carboxy-3',4'-dihydroxyazobenzene; HOOC.C6H4.N:N.C6H3(OH)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Ga+++ sp oth/un 20°C 0.10M U 19680Ya (84865) 335  
 K(Ga(OH)2+H2L)=7.15

\*\*\*\*\*

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  
-----  
Ga+++ gl diox/w 25°C 50% U B2=19.42 1972GDb (85151) 336  
B3=28.47

Medium: 50% dioxan, 0.25 M NaClO4

-----  
Ga+++ dis oth/un 20°C 1.0M U K1=10.22 B2=20.21 1965AKb (85152) 337  
K3=9.83

\*\*\*\*\*

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  
-----  
Ga+++ sp NaClO4 rt 0.10M U 1971NOc (86728) 338  
K(Ga+2H2L)=11.6

-----  
Ga+++ sp oth/un 25°C 0.10M U 1968BNa (86729) 339  
K(Ga+2HL)=9.57

\*\*\*\*\*

C14H10O7S H5L CAS 30782-99-1 (5045)  
1,2,5,10-Tetrahydroxyanthracene-3-sulfonic acid (Leucoalizarin red S)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp NaClO4 ? 0.10M U 1971NPb (86935) 340  
K(Ga+H3L)=9.0  
K(Ga+H4L)=6.2

\*\*\*\*\*

C14H16N2O5S H2L CAS 390426-77-4 (8803)  
1-n-Butyl-5-sulfo-8-hydroxyquinoline-7-carboxamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp none 25°C 0.0 C K1=11.6 B2=22.70 2001LAa (87906) 341  
B3=32.7

Method: spectrophotometric titration.

\*\*\*\*\*

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  
-----  
Ga+++ EMF KNO3 25°C 0.10M C K1=24.38 1997DFa (88659) 342  
K(GaL+H)=2.08  
K[Ga(OH)L+H]=6.8  
-----

Ga+++	gl	KNO3	35°C	0.10M	U			K1=21.99	1980KHb (88660)	343
-----										
Ga+++	gl	KNO3	25°C	0.10M	C			K1=22.34 K(GaL+H)=2.7 K(GaL(OH)+H)=2.7	1976HMd (88661)	344
-----										
Ga+++	EMF	NaClO4	20°C	0.10M	U			K1=23.10 K(GaL+OH)=6.46	1967BAc (88662)	345
-----										
Ga+++	oth	oth/un	?	0.10M	U	I		K1=22.293	1966GJa (88663)	346
Method: amperometric titration. I=1.0, K1=21.753										
-----										
Ga+++	ISE	KNO3	20°C	0.10M	U			K1=22.5 K(GaL+H)=2.43	1966Mca (88664)	347
-----										
Ga+++	dis	NaClO4	20°C	0.10M	U				1963STc (88665)	348
B(GaL(OH))=35.6										
Medium: KClO4										
-----										
Ga+++	vlt	KNO3	20°C	0.10M	U			K1=22.91	1954SGa (88666)	349
*****										
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
-----										
Ga+++	gl	KCl	25°C	1.00M	U			K1=8.56	1984MFb (88855)	350
*****										
C14H22N4O10 H4L DGENTA CAS 29725-86-8 (2371)										
N,N-Diglycyldiaminoethane-tetraethanoic acid;(-CH2.HNCOCH2N(CH2COOH)2)2										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-----										
Ga+++	gl	KNO3	25°C	0.10M	C			K1=13.26 K(GaL+H)=3.75	1976HMd (88951)	351
*****										
C14H23N3O8 H4L NODASA CAS 210217-93-9 (8716)										
1,4,7-Triazacyclononane-1-succinic acid-4,7-diethanoic acid;										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-----										
Ga+++	gl	KNO3	37°C	0.50M	U			K1=30.9	1998AMa (89009)	352
*****										
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
-----										
Ga+++	EMF	KNO3	25°C	0.10M	C			K1=25.11 K(GaL+H)=4.06	1997DFa (89248)	353

K[Ga(OH)L+H]=7.1

K(GaHL+H)=1.81

Ga+++	gl	KNO3	35°C	0.10M	U	K1=22.41	1980KHb (89249)	354
Ga+++	sp	NaClO4	20°C	0.1M	U	K1=26.19	1977KVb (89250)	355
Ga+++	gl	KNO3	25°C	0.10M	C	K1=23.32 K(GaL+H)=4.16 K(GaL(OH)+H)=7.51	1976HMd (89251)	356
Ga+++	sp	NaClO4	25°C	0.10M	U	K1=28.1	1973NKa (89252)	357
Ga+++	sp	oth/un	20°C	?	U	K1=26.84	1970CAb (89253)	358
Ga+++	EMF	NaClO4	20°C	0.10M	U	K1=25.54 K(GaL+H)=4.35 K(GaL+OH)=6.52	1967BAc (89254)	359
Ga+++	ISE	KNO3	20°C	0.10M	U	K1=23.0 K(GaL+H)=3.92	1966Mca (89255)	360
*****								
C14H24N2O10	EGTA		CAS 67-42-5		(349)			
Ethyleneglycol-0,0'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Ga+++	sp	oth/un	19°C	dil	U	K1=19.02	1971CAg (89866)	361
*****								
C14H25N3O7	H3L		(5397)					
1-Oxa-4,7,10-triazacyclododecane-4,7,10-triethanoic acid;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Ga+++	gl	KCl	25°C	0.10M	C	K1=21.3 K(GaL+H)=2.66 K(Ga(OH)L+H)=7.84	1993DSa (90084)	362
*****								
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
Ga+++	gl	R4N.X	25°C	0.10M	M	K1=13.96	1986COb (90190)	363
*****								
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

Ga+++ gl R4N.X 25°C 0.05M U K1=15.2 1999BDb (90366) 364  
Medium: Et4NC104

\*\*\*\*\*

C14H28N2O4S2 H4L CAS RH (7915)  
N,N'-Bis(2,2-dimethyl-2-mercaptoethyl)ethylenediamine-N,N'-diethanoic acid;

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

Ga+++ gl KNO3 25°C 0.10M C K1=41.0 1996SAb (90468) 365  
K(Ga(OH)L+H)=11.4

\*\*\*\*\*

C14H32N2O4 L CAS 102-60-3 (2678)  
Tetra(2-hydroxypropyl)-N,N,N',N'-diaminoethane; (-CH2.N(CH2.CH(OH).CH3)2)2

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

Ga+++ gl NaNO3 25°C 0.10M U K1=7.94 1991DMb (90743) 366  
K(GdL+OH)=9.32

\*\*\*\*\*

C15H10N3OCl HL CAS 16195-35-0 (27)  
5-(4-Chlorophenylazo)-8-hydroxyquinoline; Cl.C6H4.N:N.C9H5N.OH

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

Ga+++ sp oth/un 25°C 0.10M U B2=8.15 1978KIa (90947) 367

\*\*\*\*\*

C15H10N3O5ClS H3L (7520)  
7-[(2-Hydroxy-5-chlorophenyl)azo]-8-hydroxyquinoline-5-sulfonic  
acid; C6H3Cl(OH)N=NC9H4N(OH)(SO3H)

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

Ga+++ sp KNO3 25°C 0.10M M K1=33.92 1997PKb (90953) 368

-----

Ga+++ sp KNO3 25°C 0.10M M K1=18.13 1997PKb (90954) 369

\*\*\*\*\*

C15H10O4 H2L (5140)  
7,8-Dihydroxy-4-Phenyl-coumarin;

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

Ga+++ sp oth/un ? 0.10M U 1973KSc (90990) 370

K(Ga+HL)=8.0

K(Ga(HL)+HL)=8.25

\*\*\*\*\*

C15H10O10S H5L Quercetin S F CAS 25001-18-7 (1520)  
3,5,7,3',4'-Pentahydroxy-5'-sulfoflavone; (HO)3(O)C9H2O.C6H2(SO3H)(OH)2

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

Ga+++ sp NaClO4 20°C 0.10M U K1=6.53 1989K0a (91033) 371

-----  
Ga+++ sp NaClO4 20°C 0.10M U 1976KTb (91034) 372

B(GaH4L)=9.46  
B(Ga2H2L)=26.04

\*\*\*\*\*

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

-----  
Ga+++ vlt alc/w 25°C 50% U K1=15.14 1973TBa (91215) 373  
Medium: 50% EtOH, 0.06 M (HClO4,NaClO4)

-----  
Ga+++ sp oth/un 25°C 0.10M U 1972BNb (91216) 374

K(GaOH+L)=15.17

\*\*\*\*\*

C15H11N3O HL CAS 4312-09-8 (989)  
5-Phenylazo-8-hydroxyquinoline; C6H5.N:N.C9H5N.OH

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

-----  
Ga+++ sp oth/un 25°C 0.10M U B2=9.43 1978KIa (91267) 375

\*\*\*\*\*

C15H11N3O4S H2L 1-PAN-4S (7010)  
2-(2-Pyridylazo)-1-naphthol-4-sulfonic acid;

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

-----  
Ga+++ sp KNO3 25°C 0.10M U K1=9.40 1980VHa (91324) 376

\*\*\*\*\*

C15H11N3O5S H3L CAS 111248-75-0 (8411)  
5-(2'-Hydroxy-5'-phenylazo)-8-quinolinol;

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

-----  
Ga+++ sp oth/un RT dil C 1985IBa (91341) 377

K1eff=4.98  
B2eff=9.42  
B3eff=13.57

Medium: Britton and Robinson buffer, pH 4.5

\*\*\*\*\*

C15H16N4OBr2 HL CAS 14337-54-3 (993)  
2-(3,5-Dibromo-2-pyridylazo)-5-diethylaminophenol;

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

-----  
Ga+++ sp oth/un ? ? U B2=6.18 1972GDc (91941) 378

\*\*\*\*\*

C15H17N4OBr HL CAS 14357-53-2 (712)

2-(5-Bromo-2-pyridylazo)-5-diethylaminophenol; BrC5H3N.N:N.C6H3(OH)N(CH3)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp oth/un ? ? U B2=6.04 1972GDc (91981) 379  
\*\*\*\*\*  
C15H17N4OCl HL CAS 26015-51-0 (5137)  
2-(5-Chloro-2-pyridylazo)-5-diethyl-m-aminophenol;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp oth/un ? ? U B2=5.98 1972GDc (91985) 380  
\*\*\*\*\*  
C15H18N4O HL CAS 14337-52-1 (5124)  
5-Diethylamino-2-(2-pyridylazo)phenol;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp oth/un ? 0.10M U B2=6.40 1972GDc (92096) 381  
\*\*\*\*\*  
C15H20N2O7 H4L HBET (6954)  
N-(Hydroxybenzyl)diaminoethane-N,N',N'-triethanoic acid;  
HO.C6H4.CH2.N(CH2COOH)CH2CH2.N(CH2COOH)2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ gl KCl 25°C 0.10M C K1=24.67 1995MMa (92168) 382  
B(GaHL)=29.89  
B(GaH2L)=32.06  
\*\*\*\*\*  
C16H11N2O2Cl H2L CAS 3566-94-7 (3474)  
1-(5-Chloro-2-hydroxyphenylazo)-2-hydroxynaphthalene;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp alc/w ? 40% U 1967NNb (92761) 383  
K(GaOH+HL)=21.30  
K(GaOH+2HL)=37.10  
Medium: 40% EtOH, 0.1 M  
\*\*\*\*\*  
C16H11N5O12S2 H4L CAS 3769-61-7 (5175)  
2-(2-Hydroxy-3,5-dinitrophenylazo)-8-amino-1-naphthol-3,6-disulfonic acid;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Ga+++ sp oth/un 20°C 0.10M U 1968DYa (92904) 384  
K(GaOH+H2L=Ga(OH)HL+H)=5.54  
\*\*\*\*\*  
C16H12N2O6S H4L CAS 16625-47-5 (5178)  
1-(2,4-Dihydroxyphenylazo)-2-hydroxynaphthalene-4-sulfonic acid;  
-----

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

Ga+++ sp oth/un 25°C 0.10M U 1967NNa (93027) 385

K(Ga+HL)=16.92  
K(GaOH+2HL)=16.90

\*\*\*\*\*  
C16H12N2O8S2 H4L Chromotrope 2R CAS 4197-07-3 (2604)  
2-(Benzeneazo)-chromotropic acid, Acid Red 29  
-----

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

Ga+++ gl NaClO4 25°C 0.10M U K1=20.20 B2=35.60 1975MPa (93065) 386

\*\*\*\*\*  
C16H12N2O11S3 H5L CAS 548-81-2 (5180)  
2-(4'-Sulfophenylazo)chromotropic acid,  
2-(4-sulfophenylazo)-1,8-dihydroxyaphthalene-3,6-diol  
-----

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

Ga+++ gl NaClO4 25°C 0.10M U K1=14.17 B2=26.27 1975MPa (93093) 387

\*\*\*\*\*  
C16H13N2O10AsS2 H5L Thorin I CAS 3688-92-4 (2609)  
1-((2-Arsonophenyl)azo)-2-hydroxy-3,6-naphthalylidylsulfonic acid;  
-----

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

Ga+++ sp oth/un 25°C ? U 1968GSe (93192) 388

K(?)=9.9

\*\*\*\*\*  
C16H13N2O11AsS2 H6L Arsenazo I CAS 520-10-5 (277)  
2-(2'-Arsonophenylazo)chromotropic acid;  
-----

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

Ga+++ sp oth/un 25°C 0.0 U 1973JMa (93254) 389

K(Ga+H4L=GaH2L+2H)=5.7

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

Ga+++ EMF KCl 25°C 0.10M C K1=21.33 1991CMb (94895) 390

K(GaL+H)=4.00

\*\*\*\*\*  
C16H29N3O8 H3L (6699)  
1,7-Dioxo-4,10,13-triazacyclopentadecane-N,N',N''-triethanoic acid;  
-----

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

-----  
Ga+++ gl KCl 25°C 0.10M C K1=17.1 1993DSa (94973) 391  
K(Ga(OH)L+H)=3.48

\*\*\*\*\*  
C16H32N2O5 L Cryptand 2,2,1 CAS 31364-42-8 (837)  
1,10-Diaza-4,7,13,16,21-pentaoxabicyclo[8,8,5]tricosane (2,2,1);  
-----

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

Ga+++ gl R4N.X 25°C 0.05M U K1=14.9 1999BDb (95207) 392  
Medium: Et4NC104

\*\*\*\*\*  
C17H9NO2 L (2610)  
2,3-Pyridineanthraquinone;  
-----

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

Ga+++ sp non-aq 25°C 100% U K(GaCl3+L)=5.23 1979ZRb (95681) 393

Medium: benzene

\*\*\*\*\*  
C17H14N2O2 L CAS 4551-69-3 (698)  
4-Benzoyl-3-methyl-1-phenyl-2-pyrazolin-5-one;  
-----

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

Ga+++ dis non-aq 25°C 100% C H K(Ga+3HL(org))=1.47 1998YSa (95882) 394

Method: solvent extraction into CCl4. DH=16.5 kJ mol<sup>-1</sup>,  
DS=83.6 J K<sup>-1</sup> mol<sup>-1</sup>. K: Ga+3HL(org)=GaL3(org)+3H.

\*\*\*\*\*  
C17H24N4O6 H3L (7349)  
3,6,9,15-Tetraazabicyclo[9.3.1]pentadeca-1(15),11,13-triene-3,6,9-triethanoic acid;  
-----

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

Ga+++ gl R4N.X 25°C 0.10M C K1=19.37 1997DQa (96455) 395  
K(GaL+H)=2.7  
K(Ga2(OH)L2+H)=3.2

Medium: Me4NNO3

\*\*\*\*\*  
C17H30N4O8 H4L TRITA CAS 60239-20-5 (1018)  
1,4,7,10-Tetraazacyclotridecane-1,4,7,10-tetraethanoic acid;  
-----

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

Ga+++ gl KCl 25°C 0.10M C K1=19.91 1991CMb (96649) 396  
K(GaL+H)=3.66

\*\*\*\*\*  
C17H33N3O9 L CAS 132259-53-1 (6558)



Triethylenetetraaminehexaethanoic acid;((HOOC.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	R4N.X	25°C	0.10M	C			K1=27.75 K(GaHL+H)=4.8 K(GaH2L+H)=3.9 K(GaL+Ga)=9.43 K(Ga2L(OH)+H)=12.40	1998ACc (98034)	403
Medium: N(CH3)4NO3. K(Ga2L(OH)2+2H)=3.25.										
Ga+++	gl	KNO3	25°C	0.10M	C	M		K1=27.724 K(GaL+H)=5.09 K(GaHL+H)=4.00 K(GaH2L+H)=2.09 *K(GaL)=-9.35	1998AKa (98035)	404
K(GaL+Ga)=15.18, K(Ga2L+H)=1.19, *K(Ga2L)=-3.72, *K(Ga2H-1L)=-4.42. K(GaL+Ca)=2.39, K(GaCaL+H)=4.1, K(GaCaHL+H)=4.6, *K(GaCaL)=-5.20.										
Ga+++	EMF	KNO3	25°C	0.10M	C			K1=27.75 K(GaL+H)=4.8 K(GaL+Ga)=12.40 K(GaHL+H)=3.9 K[Ga2(OH)L+H]=3.25	1997DFa (98036)	405
K[Ga2(OH)2L+2H]=7.46 K[Ga(OH)L+H]=9.43										
Ga+++	gl	KNO3	35°C	0.10M	U			K1=23.60	1980KHb (98037)	406
Ga+++	gl	KNO3	25°C	0.10M	U			K1=28.21 K(GaL+H)=5.30 K(GaHL+H)=3.96 K(GaH2L+H)=2.56 *K(GaL)=-9.64	1980MMd (98038)	407
Ga+++	gl	KNO3	25°C	0.10M	C			K(GaL+H)=5.6 K(GaHL+H)=3.62 K(GaH2L+H)=2.58	1976HMd (98039)	408
Ga+++	gl	KNO3	25°C	0.10M	U			K1=15.1 K(GaL+H)=4.52 K(GaHL+H)=3.54 K(GaH2L+H)=2.29 B(Ga2L)=25.1	1969YMa (98040)	409

\*\*\*\*\*  
 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
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 Ga+++ gl KNO3 25°C 0.10M C K1=39.57 1976HMd (99998) 425  
 \*\*\*\*\*  
 C20H24N2O12S2 H6L CAS 3625-85-3 (5755)  
 N,N'-Bis(2-hydroxy-5-sulfobenzyl)-diaminoethane-N,N'-diethanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	M			K1=37.4 K(GaL+H)=1.18	1990MMa (100030)	426

Ga+++	gl	KCl	25°C	0.10M	C			K1=37.47 K(GaL+H)=1.18	1989MSc (100031)	427
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Ga+++	gl	KCl	25°C	0.10M	C			K1=37.95 K(GaL+H)=2.62	1984TMb (100032)	428
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\*\*\*\*\*  
 C20H26N4O6 H4L ENDA-HP (6746)  
 N,N'-Bis(3-hydroxy-6-methyl-2-pyridylmethyl)diaminoethane-N,N'-diethanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	C			K1=29.18 K(GaL+H)=5.94 K(GaHL+H)=4.85	1992MSa (100330)	429

\*\*\*\*\*  
 C20H30N2O8P2 H4L CAS 112827-88-0 (8105)  
 N,N'-Bis(2-hydroxybenzyl)diaminoethane-N,N'-bis(methylenephosphonic acid monomethyl ester);  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KCl	25°C	0.10M	C			K1=28.03 K(GaOHL+H)=6.51	1984TMd (100414)	430

\*\*\*\*\*  
 C20H30N4O8S2 H2L CAS 173102-22-2 (3839)  
 1,10-Bis(2-hydroxy-5-sulfonylphenyl)-1,4,7,10-tetraazadecane;  
 (C6H3(OH)(HSO3)CH2NHCH2CH2NHCH2)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaCl	25°C	0.16M	C			K1=28.33	1996WCa (100425)	431

\*\*\*\*\*  
 C20H39N3O9 L CAS 132234-45-8 (6559)  
 1,1,1-Tris((3-(hydroxy(methylcarbonyl)amino)propoxy)methyl)ethane;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KCl	25°C	0.10M	C			K1=27.29 K(GaL+H)=2.32	1991MSa (100762)	432

K(GaHL+H)=1.6

\*\*\*\*\*

C21H21NO3 L CAS 6393-39-1 (7647)  
Tris(2-hydroxybenzyl)amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	alc/w	25°C	70%	C			K1=32.32 K(GaL+H)=6.50	1998MMa (101160)	433

Medium: 70% (v/v) EtOH/H2O, 0.1 M KCl.

\*\*\*\*\*

C21H21NS3 L CAS 215432-65-8 (7646)  
Tris(2-mercaptobenzyl)amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	alc/w	25°C	70%	C			K1=20.5 K(GaL+H)=2.0	1998MMa (101162)	434

Medium: 70% (v/v) EtOH/H2O, 0.1 M KCl.

\*\*\*\*\*

C21H25N3O7 H4L (6563)  
N-(2-Hydroxybenzyl)-N'-(pyridoxyl)ethylenediamine-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	C			K1=31.0 K(GaL+H)=6.88 K(GaHL+H)=3.63	1991MSb (101273)	435

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	oth/un	?	?	U			K(Ga+H4L)=14.75 K(Ga+2HL+2OH=GaL2)=23.18	1971PKc (101499)	436

\*\*\*\*\*

C22H26N4O8 H4L (5526)  
N,N'-Dipyridoxylethylenediamine-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	M			K1=32.31 K(GaL+H)=7.10 K(GaHL+H)=6.22	1990MMa (101955)	437

\*\*\*\*\*

Ga+++	gl	KCl	25°C	0.10M	C			K1=32.31 K(GaL+H)=7.10 K(GaHL+H)=6.2	1989MSc (101956)	438
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 Ga+++ nmr none 15°C 0.0 U K1=36.31 1985TMa (101957) 439  
 K(GaL+H)=7.31  
 K(GaHL+H)=6.38  
 -----

Ga+++ gl KCl 25°C 0.10M C K1=36.35 1984TMb (101958) 440  
 K(GaL+H)=7.31  
 K(GaHL+H)=6.38  
 -----

Ga+++ gl KCl 25°C 0.10M C K1=36.35 1984TMc (101959) 441  
 K(GaL+H)=7.31  
 K(GaHL+H)=6.38  
 -----

\*\*\*\*\*  
 C22H31N5O6 H2L CAS 813432-03-0 (9200)  
 Imino-bis(acetyl(1-(3'-aminopropyl)-3-hydroxy-2-methyl-4-pyridinone));  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KN03	25°C	0.10M	C			K1=24.30 B(GaHL)=28.83 B(GaH3L)=33.21 B(Ga2L3)=68.44 B(Ga2HL3)=74.64	2004SGc (102192)	442

B(Ga2H2L3)=80.16, B(Ga2H3L3)=84.97, B(GaH-1L)=18.23  
 \*\*\*\*\*  
 C22H34N2O8P2 H4L CAS 92278-41-6 (8106)  
 N,N'-Bis(2-hydroxybenzyl)diaminoethane-N,N'-bis(methylenephosphonic acid monoethyl ester);  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KCl	25°C	0.10M	C			K1=27.98 K(GaOHL+H)=6.46	1984TMd (102217)	443

\*\*\*\*\*  
 C22H34N4O8S2 H2L CAS 173102-23-3 (3949)  
 1,12-Bis(2-hydroxy-5-sulfophenyl)-1,5,8,12-tetraazadodecane;  
 (C6H3(OH)(HSO3)CH2NHC3H6NHCH2)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaCl	25°C	0.16M	C			K1=28.27	1996WCa (102225)	444

\*\*\*\*\*  
 C22H37N5O14 H7L CAS 3234-59-1 (2425)  
 Tetraethylenepentamineheptaethanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KN03	25°C	0.10M	U			K1=28.16 K(GaL+H)=7.87 K(GaHL+H)=4.90	1980MMd (102325)	445

K(GaH2L+H)=3.70

K(GaH3L+H)=2.50

\*K(GaL)=-9.77.

\*\*\*\*\*

C22H41N5O8 H3L CAS 189687-33-0 (7103)  
Diethylenetriamine-N,N',N''-triethanoic acid-N,N''-bis(butylamide);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KNO3	25°C	0.10M	C			K1=18.18 K(GaL+H)=3.20 *K(GaL)=-4.57	1995GDa (102387)	446

\*\*\*\*\*

C23H16O9Cl2S H4L Chrome azuro1 S CAS 1667-99-8 (711)  
Chromazuro1 S;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	oth/un	?	?	U			K1=6.28	1969ASa (102557)	447
Ga+++	sp	oth/un	25°C	?	U			K1eff=4.5 (pH 4.0)	1966DMc (102558)	448

\*\*\*\*\*

C23H30N2O6 H4L CAS 132750-98-2 (6543)  
N,N'-Trimethylenebis(2-(2-hydroxy-3,5-dimethylphenyl)glycine);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	C			K1=32.46 K(GaL+H)=3.91	1991BMa (102756)	449

For racemic ligand. For meso form: K1=33.96, K(GaL+H)=3.70

\*\*\*\*\*

C24H29N3O12S3 H6L (7355)  
1,2,3-Tris((2-hydroxy-5-sulfobenzyl)amino)propane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaCl	25°C	0.16M	C			K1=31.54	1997COa (103015)	450

\*\*\*\*\*

C24H31N3O8 H3L CAS 35369-55-2 (6972)  
N,N''-Bis(2-hydroxybenzyl)-2,5,8-triazanonane-N,N',N''-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KCl	25°C	0.10M	C			K1=26.11 K(GaL+H)=10.41 K(GaHL+H)=7.99 K(GaH2L+H)=5.58	1994MMF (103057)	451

\*\*\*\*\*

C24H32N2O6 H3L Me4-HBED (6507)

N,N'-Bis(2-hydroxy-3,5-dimethylbenzyl)ethylenediamine-N,N'-diethanoic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	M			K1=34.19	1990MMa (103062)	452

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C24H33N5O8 H5L (6747)  
N,N''-Bis(3-hydroxy-6-methyl-2-pyridylmethyl)diethylenetriamine-N,N'.N''-triethanoic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	C			K1=31.02 K(GaL+H)=7.08 K(GaHL+H)=5.65 K(GaH2L+H)=4.52 K(GaH3L+H)=2.27	1992MSa (103203)	453

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\*K(GaL)=-9.77

\*\*\*\*\*  
C24H34N2O5 H3L (6509)

N,N'-Bis(2-hydroxy-3,5-dimethylbenzyl)-N-(2-hydroxyethyl)-diaminoethane-N'-ethanoic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	M			K1=30.50 K(Ga(OH)L+H=GaL+H2O)=6.71	1990MMa (103214)	454

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\*\*\*\*\*  
C24H34N3O6 H3L CAS 134627-54-6 (6564)

N-(2-Hydroxy-3,5-dimethylbenzyl)-N'-((3-hydroxy-1,2,5-trimethyl-4-pyridinyl)methyl)EDDA;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	C			K1=31.85	1991MSb (103218)	455

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\*\*\*\*\*  
C24H36N4O8 H2L CAS 134653-17-1 (6565)  
N,N'-Bis(1,2-dimethyl-3-hydroxy-5-hydroxymethyl)-4-pyridinyl)-methyl)diaminoethaned iethanoic acid

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	C			K1=27.3	1991MSb (103270)	456

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\*\*\*\*\*  
C25H48N6O8 H3L Desferrioxamine CAS 70-51-9 (2488)  
Desferrioxamine B; NH2.((CH2)5.NOH.CO.C2H4.CO.NH)2.(CH2)5.NOH.CO.CH3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	KCl	25°C	1.00M	C				1989BHa (103815)	457

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K(Ga+HL)=27.56  
K(GaHL+H)=1.10  
K(GaH2L+H)=0.78  
K(GaL+H)=10.14

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Ga+++ gl KCl 25°C 0.10M C K1=28.65 1989EHa (103816) 458  
K(Ga+HL)=28.17  
K(GaL+H)=10.31

\*\*\*\*\*  
C26H33N3O12S3 H6L (7354)  
1,1,1-Tris(((2-hydroxy-5-sulfobenzyl)amino)methyl)ethane;

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

-----  
Ga+++ gl NaCl 25°C 0.16M C K1=31.83 1997COa (104062) 459  
\*\*\*\*\*

C26H34N6O8 H4L CAS 132709-65-0 (8941)  
3,6,14,17,23,24-Hexaazatricyclo[2.3.1.1.0.0]dotriaconta-1,8,10,12,19,21-hexaene-3,6,14,17-tetraacetic acid;

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

-----  
Ga+++ gl KCl 25°C 0.10M M K1=ca. 20 1996MBb (104093) 460  
\*\*\*\*\*

C26H38N6 L CAS 180684-75-7 (7295)  
1,8,14,17,24,31-Hexaazatricyclo[25.3.1.1.0.0]dotriaconta-10,12,14,26,28,

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

-----  
Ga+++ gl KNO3 25°C 0.20M C K1=14.9 1996FJa (104204) 461  
\*\*\*\*\*

C26H48N6O10 H4L CAS 207388-25-8 (7648)  
Triethylenetetramine-N,N,N',N'',N''',N'''-hexaethanoic acid NN-bis(butanamide);

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

-----  
Ga+++ gl R4N.X 25°C 0.10M C K1=21.57 1998ACc (104306) 462  
K(GaL+H)=3.95  
K(GaHL+H)=2.87  
K(GaL(OH)+H)=7.18  
K(GaL+Ga)=6.6

Medium: N(CH3)4NO3. K(Ga2L(OH)+H)=2.84, K(Ga2L(OH)2+2H)=6.61.

\*\*\*\*\*  
C27H29NO11 L Adriamycin CAS 25316-40-9 (2407)  
Doxorubicin;

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

-----  
Ga+++ sp KNO3 25°C 0.10M C K(Ga+H2L)=8.09 1990Y0a (104458) 463



C29H41N5O4 H2L CAS 357333-44-9 (7996)  
Bis-(piperaziny1-4-(4-carboxybenzyl)ethyl)methylamine;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	gl	NaCl	25°C	0.15M	C			K1=15.5 K(GaL+H)=4.5 K(GaL+OH)=6.8	2001BFa (105144)	470

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Additional method: 1H and 13C NMR spectroscopy.

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C30H27N3O15 H6L Enterobactin CAS 28384-96-5 (2259)  
Enterobactin; cyclo-((OH)C6H3(OH).CO.NH.CH.CO.CH2)3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	C			K(GaL+H)=4.53 K(GaHL+H)=3.71 K(GaH2L+H)=2.5	1991LRa (105194)	471

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\*\*\*\*\*

C30H27N3O18S3 H9L TRIMCAMS CAS 77069-63-7 (5468)  
1,3,5-Tris(2,3-dihydroxy-5-sulfobenzoyl)carbamido)benzene;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	U			K1=41.0 B(GaHL)=46.93 B(GaH2L)=51.93 B(GaH3L)=54.33	1991LRb (105205)	472

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Ga+++	gl	KNO3	25°C	0.10M	U			K1=38 K(Ga+H3L=GaL+3H)=3.5 K(GaL+H)=5.7 K(GaHL+H)=4.9	1982PWa (105206)	473
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C30H44N2O6 H3L (6508)  
N,N'-Bis(2-hydroxy-3-methyl-5-tert-butylbenzyl)diaminoethane-N,N'-diethanoic acid;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	M			K1=36.30	1990MMa (105315)	474

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\*\*\*\*\*

C30H45N4O6P3 H3L CAS 182250-11-9 (8686)  
Tris(4-(phenylphosphinato)-3-methyl-3-azabutyl)amine;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	nmr	NaCl	25°C	0.16M	C			K(Ga+2H3L)=4.24	1996LRc (105322)	475

---

Method: 71Ga nmr. Medium pH 1.5.

\*\*\*\*\*

C31H32N2O13S H6L Xylenol orange CAS 63721-85-5 (432)  
5,5'-Bis-N,N-bis(carboxymethyl)aminomethyl-4'-hydroxy-3,3'-dimethylfuchstone-2"-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	oth/un	?	?	U			K(Ga+H2L)=15.2	1969ASc (105466)	476
Ga+++	sp	NaCl04	20°C	0.10M	U			K(Ga+H4L)=9.37 K(Ga2(H2L)2+2H2L)=12.49	1969NNb (105467)	477
Ga+++	sp	NaCl	20°C	0.20M	U			K(Ga+H2L)=13.36	1967KUC (105468)	478
Ga+++	sp	oth/un	25°C	?	U			K(?)=4.8	1966DMd (105469)	479
Ga+++	sp	oth/un	?	0.01M	U			K(Ga+H5L)=7.0 K(GaH5L+H5L)=4.5	1966DPb (105470)	480

\*\*\*\*\*

C33H33N3O18S3 H9L CAS 78261-77-5 (2945)  
1,3,5-Tris(N-methyl-N-(2,3-dihydroxysulfo benzoyl)aminomethyl)benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	U			K1=39.1 B(GaHL)=45.91 B(GaH2L)=52.25 B(GaH3L)=55.25	1991LRb (105878)	481

\*\*\*\*\*

C33H45N3O3 H3L (6764)  
N,N',N''-Tris(3,5-dimethyl-2-hydroxybenzyl)-1,4,7-triazacyclononane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	alc/w	25°C	75%	U			K1=44.2	1991CMc (105957)	482
Medium: 75% v/v EtOH/H2O										

\*\*\*\*\*

C34H43N3O18S3 H9L DiP-3,4-LICAMS CAS 96649-34-2 (5595)  
Diisopropyl-N,N',N''-tris(5-sulfonato-2,3-dihydroxybenzoyl)-1,5,10-triazadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ga+++	sp	KCl	25°C	0.10M	U			K1=36.6 B(GaHL)=42.94 B(GaH2L)=49.27	1991LRb (106065)	483

B(GaH3L)=53.57

-----  
Ga+++ gl KCl 25°C 0.10M C K1=36 1985KPb (106066) 484  
K(GaL+2H)=12.1

\*\*\*\*\*

C36H33N7O15S3 H6L O-TRENTOX CAS 169209-69-2 (7370)  
Tris-N-(2-aminoethyl-(8-hydroxyquinoline-5-sulphonato-7-carboxamido))amine;

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

-----  
Ga+++ sp none 25°C 0.0 C 2001LAa (106242) 485

B(GaHL)=33.7  
B(Ga2HL)=40.5  
B(Ga3HL)=44.7

Method: spectrophotometric titration.

\*\*\*\*\*

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

-----  
Ga+++ sp oth/un 25°C 0.10M C 1997ASa (106598) 486

K1eff=4.85  
K2eff=4.72

Medium: 0.10 M acetate buffer, pH 5.0.

-----  
Ga+++ sp oth/un 25°C dil U 1969KBa (106599) 487

B(GaH3L)=40.38  
K(Ga+H3L)=11.43  
K(GaH3L+H5L)=4.88

-----  
Ga+++ sp NaClO4 22°C 1.0M U 1967LMg (106600) 488

K(2Ga+2H4L=GaH3L+GaH4L+H)=4.35(?),  
K(2Ga+4H4L=Ga(H3L)2+Ga(H4L)2+2H)=7.58(?)

\*\*\*\*\*

C39H45N3O18S3 H9L TiP-MECAMS CAS 96649-36-4 (5599)  
Triisopropyl-tris(5-sulfonato-2,3-dihydroxybenzoyl)-1,3,5-tris(aminoethyl)benzene;

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

-----  
Ga+++ gl KCl 25°C 0.10M C K1=35 1985KPb (106715) 489

K(GaL+H)=7.20  
K(GaHL+H)=5.8  
K(GaH2L+H)=3.1

\*\*\*\*\*

C40H47N3O10 H7L CAS 86728-01-0 (5503)  
Bis(3-(((2-hydroxy-5-methylbenzyl)amino)methyl)-2-hydroxy-5-methylbenzyl)amine-triethanoic acid

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

-----  
 Ga+++ gl oth/un 25°C 0.10M U K1=19.20 1983YMa (106787) 490  
 K(GaH-1L+H)=5.01  
 K(GaH-2L+H)=7.48  
 K(GaH-3L+H)=9.60

\*\*\*\*\*  
 C40H51N3O18S3 H9L DC-3,4-LICAMS CAS 96649-27-2 (5598)  
 Dicyclohexyl-N,N'N''tris(5-sulfonato-2,3-dihydroxybenzoyl)-1,5,10-triazadecane;

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

Ga+++ gl KCl 25°C 0.10M C K1=35 1985KPb (106819) 491  
 K(GaL+2H)=12.0

\*\*\*\*\*  
 C41H67N7O4 L CAS 357333-45-0 (8036)  
 9-Methyl-3,6,9,12,15,22,31-heptaaza-25,28,38,41-tetraoxahexacyclohepta-tetracontae  
 xaene;

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

Ga+++ gl NaCl 25°C 0.15M C K1=13.8 2001BFa (106903) 492  
 K(GaL+H)=6.0  
 K(GdL+2H)=12.5  
 K(GdL+OH)=7.1

\*\*\*\*\*  
 Polymer HL Bleomycin (2324)  
 Bleomycin A2, B2 etc.

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

Ga+++ sp oth/un 25°C ? U 1980LPa (108088) 493  
 K1eff=4.7 (pH 7)  
 pH 7.0. Using an ISE, K1eff=4.82. Data also for other bleomycins.

\*\*\*\*\*  
 Polymer L (3532)  
 Human transferrin;

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

Ga+++ sp KNO3 25°C 0.10M C 1994HCa (108212) 494  
 Keff(Ga+HCO3L)=19.75  
 Keff(Ga+GaHCO3L)=18.80  
 Keff(Ga+L)=6.9

At pH 7.4 in 0.1M N-(2-hydroxyethyl)piperazine-N'-2-ethanesulfonic acid,  
 (HEPES) and 5mM HCO3

-----  
 Ga+++ sp oth/un 25°C 0.10M U 1983HPb (108213) 495  
 K1eff=20.3  
 K2eff=19.3

Medium: 0.1 M Tris buffer, pH 7.4; 0.027 M HCO3-. By competition with the

Ga-NTA and Ga-EDDA complexes.

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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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