SC-Database
Software version = 5.81 Data version = 4.62
Experiment list contains 914 experiments for
 (no ligands specified)
 Metal : Al+++
 (no references specified)
 (no experimental details specified)

****
e- HL Electron (442)
Electron;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ vlt oth/un hi 100% U 1971BSe (301) 1
K(Al + 2Al(l)=3Al+)=8.1
Medium: Na3AlF6(l); units of B?; 1015 C

Al+++ oth none 25°C 0.0 U 1952LAb (302) 2
K(Al+3e=Al(s))=-84.3(-1660 mV)
****
AsO4--- H3L Arsenate CAS 7778-39-4 (1557)
Arsenate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ oth oth/un 25°C 0.0 U 1990SAa (1128) 3
*K(AlAsO4(s)+H=Al+HAsO4)=-4.70
Calculated from thermodynamic data.

Al+++ sol oth/un 22°C var U 1956CHc (1129) 4
Kso(AlL)=-15.80
****
BO4H4- HL Borate CAS 10043-35-3 (991)
Borate; B(OH)4-

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ nmr oth/un 25°C var C 2004TSa (1301) 5
At 25 C by 27Al nmr. Medium: 0.02-0.2 m B(OH)3, pH 8.95.
K(Al(OH)4+B(OH)3=Al(OH)3BO(OH)2+H2O)=1.62.

Al+++ sol oth/un 50°C var C T H 2004TSa (1302) 6
Solubility of gibbsite or boehmite in 0.02-0.2 m B(OH)3, pH 8.95, 50-200 C
K(Al(OH)4+B(OH)3=Al(OH)3BO(OH)2+H2O)=1.58 (50 C), 1.46 (78), 1.25 (200).

Al+++ sol none 22°C 0.0 U 1961SBc (1303) 7
Kso(Al(OH)3L3)?=-22.92
By spectrophotometry K1=7.62?, B2=14.64?, B3=20.0? B6=38.54?
****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	con	non-aq	-78°C	100%	U	T	1977GPa (1717)		8
							K(2AlBr3=AlBr4+AlBr2)=-6.6		
Medium: CH3Br									
Al+++	EMF	non-aq	210°C	100%	U	T H	1973TDa (1718)		9
							K(2Al4=Al2L7+L)=-4.40		
Medium: (Na,Al)Br. DH(K)=20.1 kJ mol-1; K=-4.30(225 C), -4.15(240 C) m units									
Al+++	nmr	oth/un	26°C	var	U	HM	1972JOb (1719)		10
							K(2AlCl3L=AlCl4+AlCl2L2)=-0.5		
							K'=-0.1		
							K"(2AlClL3=AlCl2L2+AlL4)=-0.4		
K': 2AlCl2L2=AlCl3L+AlClL3. DH(K)=0.2 kJ mol-1; DH(K')=-1.5; DH(K")=-0.3									
Al+++	con	non-aq	21°C	100%	U	I	1972SVa (1720)		11
							K(Al2L6=AlL2+AlL4)=-22.14		
Medium: n-heptane. In benzene: K=-16.12									
Al+++	con	non-aq	25°C	100%	U		1964WEa (1721)		12
							K3=4.9		
							K4=3.3		
							K(2AlBr3=A12Br6)=0.0		
Medium:PhNO2									

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	3.00M	C	I	1987HSa (3141)		13
							B(-4,2,1)=-16.61		
							B(-5,3,1)=-18.39		
B(p,q,r); pH+qAl+rCO2(g)=HpAlq(CO2(g))r									
Al+++	gl	NaCl	25°C	0.60M	C		1981OFa (3142)		14
							B(-4,2,1)=-20.41		
							B(-5,3,1)=-22.74		
B(p,q,r): pH + qAl + rCO2(g) = HpAlq(CO2)r									

****

C6N6Co--- H3L Cyanocobaltate (5470)
Hexacyanocobaltate; [Co(CN)6]---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	con	none	25°C	0.00	U		K1=4.30	1971KKf (3485)	15

By kinetics, (K1out/K1)=-1.3

****

C6N6Fe--- H3L Ferricyanide (2491)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	kin	KNO3	25°C	0.01M	C		K1=4.30		1983KLa (3629)	16

Method: stopped flow, by conductivity measurement.

****

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

Chloride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	non-aq	25°C	100%	C	IH	K1=1.73	B2= 2.20	1998UKb (4443)	17

Medium: DMF, 0.2 M Et4NClO4. Also data for DMA, 0.2 M Bu4NClO4.
By calorimetry, DH(K1)=5.1 kJ mol-1, DH(B2)=24.4, DH(B3)=34.

Al+++	EMF	non-aq	40°C	100%	U				1985KOa (4444)	18
							K(Al2Cl7+Cl=2AlCl4)=-17.0			

Medium: N-1-butylpyridinium Cl. In 1-Me-3-ethylimidazolium Cl, K=-17.1

Al+++	con	non-aq	-78°C	100%	U	T H			1977GPa (4445)	19
							K(2AlCl3=AlCl4+AlCl2)=-2.48			

Medium: CH2Cl2, at -78 and 0 C. DH=-15 kJ mol-1,DS=-125 J K-1 mol-1

Al+++	oth	oth/un	550°C	100%	U				1974CHb (4446)	20
							B4=5.60(x units)			

Medium: (K,Al)Cl. Method: Raman

Al+++	EMF	non-aq	300°C	100%	U				1974IKa (4447)	21
							K(Al2L6+L)=7.5			
							K(2AlL4=Al2L7+L)=-5.5			

Medium: (K,Al)Cl; x units. 300-450 C

Al+++	EMF	non-aq	300°C	100%	U				1974IKa (4448)	22
							K(Al2L6+L)=9.5			
							K(2AlL4=Al2L7+L)=-5.5			

Medium: (Cs,Al)Cl; x units. 300-450 C

Al+++	EMF	non-aq	300°C	100%	U				1973BBc (4449)	23
							K(2AlL4=Al2L7+L)=-7.83			

Medium: (K,Al)Cl(51.7% KCl); m units

Al+++	EMF	non-aq	175°C	100%	U	T H			1973BJc (4450)	24
							K(AlL3+AlL4)=4.38			

Medium: (Na,Al)Cl;m units. DH=-54.4 kJ mol-1,DS=-38 J K-1 m-1(200 C), K=4.11 (200 C),3.53(250 C),3.00(300 C),2.60(355 C). K4=10.8(200 C)

```
Al+++      EMF non-aq 450°C 100%  U                    1973SSi  (4451)  25
                                        B4=25
                                        K(Al2L6+L)=5.70
                                        K(2AlL4=Al2L7+L)=-6.24
Medium: (Na,Al)Cl
-------------------------------------------------------------------------
Al+++      EMF non-aq 175°C 100%  U T H                  1973TDa  (4452)  26
                                        K(2AlL4=Al2L7+L)=-5.50
Medium: (Na,Al)Cl. DH(B)=28.0 kJ mol-1. K=-5.32(190 C), -5.00(210 C),
-4.87(225 C), -4.75(240 C) m units
-------------------------------------------------------------------------
Al+++      EMF non-aq 175°C 100%  U                      1972FKb  (4453)  27
                                        K4=11.5
                                        K(AlL3+AlL4)=4.4
Medium: (Na,Al)Cl
-------------------------------------------------------------------------
Al+++      oth non-aq 300°C 100%  U  I                   1972KOa  (4454)  28
                                        K(Co(Al2Cl7)2+4Cl)=6.5
Medium: molten (LiAl)Cl. K: (Co(Al2Cl7)2+4Cl=CoCl4+2Al2Cl7.
K=1.2(in (NaAl)Cl); 19.1((in KAl)Cl); 18.7(in (RbAl)Cl); 19.7(in (CsAl)Cl)
-------------------------------------------------------------------------
Al+++      EMF non-aq 300°C 100%  U T                    1972KOa  (4455)  29
                                        K(Al2L6+2AlL4=2Al2L7)=1
Medium: (xK,(1-x)Al)Cl; 0.35<x<0.45
-------------------------------------------------------------------------
Al+++      oth non-aq 170°C 100%  U                      1971ORa  (4456)  30
                                        K(Al2L6+2AlL4=2Al2L7)=2.1
Medium: (K,Al)Cl; m units. 170-240 C. Method: Raman. Error in abstract ?
-------------------------------------------------------------------------
Al+++      oth oth/un   ?   var  U        K2=0.5         1971SCc  (4457)  31
                                        K3=-2.7
Method: ionophoresis
-------------------------------------------------------------------------
Al+++      EMF non-aq 175°C 100%  U T                    1971TMa  (4458)  32
                                        k(2AlL4=Al2L7+L)=-7.1
Medium: (Na,Al)Cl;K=-6.3(250 C),-5.7(300 C),-5.3(350 C),-5.0(400 C)
-------------------------------------------------------------------------
Al+++      con non-aq 25°C 100%  U                      1970MLa  (4459)  33
                                        K=5.0
Medium: CH3COCl. K: AlL3+CH3COL=CH3CO++AlL4
-------------------------------------------------------------------------
Al+++      oth non-aq 289°C 100%  U                     1969JSb  (4460)  34
                                        K(2AlL4=Al2L7+L)=-3.52
Medium: KAlCl4; m units. Method: gas chromatography
-------------------------------------------------------------------------
Al+++      con non-aq 25°C 100%  U                      1966WIa  (4461)  35
                                        K3=4.45
                                        K4=3.04
                                        K(2AlL3+AlL2)=3.04
                                        K(Al2L5+L)=2.95
```

Medium:PhNO2

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	nmr	R4N.X	5°C	0.60M	C		K1=6.42	B2=11.83	2000BTa (6696)	36
							K3=3.99			
							K4=2.50			
							K5=0.84			

Method: 19F nmr and potentiometry. Medium: NMe4Cl
In 3M KCl at 25 C: K1=6.35, K2=5.25, K3=4.11.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	oth/un	23°C	0.10M	U				1994KGa (6697)	37
							Keff=10.7			

Method: spectrophotometric using pyrocatechol violet. Tris buffer adjusted
to a pH=5.34 with HCl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	nmr	oth/un	21°C	var	U				1991NMa (6698)	38
							K(Al(NDP)+F)=4.1			
							K(Al(NDP)F+F)=3.1			
							K(Al(NDP)F2+F)=1.8			

K(Al+NDP)=7.8, K(AlF+NDP)=5.8, K(AlF2+NDP)=4.0, K(AlF3+NDP)=2.2. NDP=
nucleoside diphosphates: guanosine diphosphate or adenosine diphosphate.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	ISE	non-aq	185°C	100%	M		K1=6.8	B2=13.04	1988JHa (6699)	39
							B3=19.7			
							B4=24.92			
							B5=28.79			

Medium: molten KSCN. K1=mol-1 kg, B2=mol-2 kg2 etc.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	ISE	KNO3	25°C	0.10M	C		K1=4.92	B2= 8.46	1988YYa (6700)	40

Method: fluoride ion selective electrode

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sol	oth/un	50°C	var	M	M			1987SMe (6701)	41
							K(AlF3(s)=Al+3F)=-21.2			

Also mixed hydroxo-fluoro complexes. Solubility using pH and pF electrodes

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	ISE	KNO3	25°C	0.10M	C	M	K1=6.40	B2=11.64	1987YHa (6702)	42
							K3=3.86, K4=2.7			

K(AlA+F)= 5.41(H3A=NTA), 5.53(H3A=HEDTA), 4.95(H4A=EDTA), 3.14(H4A=CDTA)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	NaNO3	25°C	0.10M	M	TI			1986COa (6703)	43
							B(Al(OH)F)=15.58			
							B(Al(OH)F2)=20.0			
							B(Al(OH)3F)=30.01			
							K(AlOH+F)=6.13			

K(AlOH+F)=5.97(35 C), 5.88(50 C); K(AlOH+2F)=10.36, 10.07(35 C), 9.88(50 C);
K(Al(OH)4+F)=-3.73, -3.34(35 C); I=1.0 M, K(Al(OH)3F+OH)=-3.43

```
-------------------------------------------------------------------------------
Al+++      ISE KNO3   25°C 0.10M C    M   K1=6.40   B2=11.64  1986YUa  (6704)  44
                                          K3=3.86
                                          K4=2.75
                                          K(Al(edta)+F)=4.95
                                          K(Al(cdta)+F)=3.14
Method: F ion-selective electrode. K(AlHA+F)=5.7, K(AlA+F)=4.5,
K(AlFA+F)=3.9. H3A is citric acid.
-------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.50M M                      1985TZb  (6705)  45
                                          K(Al(OH)4+L=Al(OH)3L+OH)=-2.20
Al(OH)2L2 may form, but no Ga complexes, detected.
-------------------------------------------------------------------------------
Al+++      oth none   25°C    0  U                     1984DYa  (6706)  46
                                          K(Al+F=Al(OH)F+H)=1.45
                                          K(Al+2F=Al(OH)F2+H)=6.21
                                          K(Al+F=Al(OH)2F+2H)=-4.76
                                          K(Al+3F=Al(OH)F3+H)=-0.77
Recalc. of lit. data. K(Al+F=Al(OH)3F+3H)=-10.97.
-------------------------------------------------------------------------------
Al+++      gl  R4N.X  25°C 0.20M U  I     K1=6.46   B2=11.44  1982KMa  (6707)  47
                                          B3=15.16
                                          B4=17.83
                                          B5=19.29
                                          B6=20.46
-------------------------------------------------------------------------------
Al+++      cal NaClO4 25°C  0.5M C                      1975VKb  (6708)  48
                                          DH(Al+L)=2.68 kJ/mol
                                          DH(Al+3L)=5.31 kJ/mol
                                          DH(Al+2L)=4.9 kJ/mol
Also data for 35 C
-------------------------------------------------------------------------------
Al+++      EMF non-aq 210°C 100%  U    M                1973TDa  (6709)  49
                                          K(2AlCl4+L=Al2Cl6L+2Cl)=-3.5
                                          K(2AlBr4+L=Al2Br6L+2Br)=-4.0
Medium: (Na,Al)Cl and (Na,Al)Br, m units
-------------------------------------------------------------------------------
Al+++      ISE KNO3   25°C 0.10M U  I     K1=6.45   B2=11.66  1971AMb  (6710)  50
                                          K3=3.79
                                          K4=3.18
K1=6.51,K2=5.29,K3=3.76,K4=3.05(I=0.05);  6.32,5.16,3.85,3.30(I=0.2);
6.14,5.09,3.93,3.68(I=0.5); At I=0(corr): K1=6.69,K2=5.35,K3=5.68,K4=2.75
-------------------------------------------------------------------------------
Al+++      ISE KNO3   37°C 0.10M U TI     K1=6.49   B2=11.73  1971AMb  (6711)  51
                                          K3=3.86
                                          K4=3.38
K1=6.71,K2=5.26,K3=3.92,K4=3.29(I=0.05); 6.39,5.17,3.86,3.38(I=0.2);
6.29,5.09,3.84,3.43. At I=0(corr): K1=6.68,K2=5.34,K3=3.94,K4=3.29
-------------------------------------------------------------------------------
Al+++      EMF NaClO4 25°C  1.0M U   H                1971WTa  (6712)  52
```

*K(Al+HF=AlF+H)=3.15
*K(AlF+HF=AlF2+H)=1.99
Method: quinhydrone electrode. By calorimetry: DH(*K1)=3.10 kJ mol-1, DS=128 J K-1 mol-1

Al+++ nmr oth/un -15°C var U 1970MWa (6713) 53
K(2AlF=Al+AlF2)=-0.8
K(2AlF2=AlF+AlF3)=-0.9
K(2AlF3=AlF2+AlF4)=-1.4
Medium: Al(NO3,F). Method: nmr

Al+++ ISE R4N.X 25°C 0.01M U I K1=6.65 B2=12.09 1969BAa (6714) 54
K3=3.92
K4=2.38
Medium: NH4NO3. K1=6.40, K2=5.19, K3=3.91, K4=2.42(I=0.1); K1=6.29, K2=4.97, K3=3.73, K4=2.50(I=0.3); I=0(corr): K1=6.98, K2=5.62, K3=4.05, K4=2.38

Al+++ oth oth/un 782°C 100% U 1969RLa (6715) 55
K5.K6=1.22
Medium: molten (Li,Al)F. Method: combination of thermodynamic data

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Al+++ oth oth/un 25?°C var U K1=6.08 B2=11.10 1964BSc (6716) 56
Method:refractometry.

Al+++ oth non-aq 999°C 100% U 1962RBa (6717) 57
K5K6=1.7
Method freezing point, ca.1000 C. Medium: Na3AlF6(l), ionic fraction units

---

Al+++ oth non-aq 930°C 100% U 1960BGe (6718) 58
K5.K6=1.45
Method: freezing point. Medium: Na3AlF6(liquid). 1008-930 C

Al+++ oth non-aq 999°C 100% U T H 1960FFb (6719) 59
K5K6=1.05
In liquid Na3AlF6, 1000-1090 C. DH(K5K6)=-92.0KJ mol-1. K5K6=0.96(1030 C), 0.82(1075 C), 0.80(1090 C). Method: density

---

Al+++ oth non-aq 999°C 100% U 1960ROa (6720) 60
K5K6=0.75
Method: freezing point. Medium: Na3AlF3(l), mole fraction units

---

Al+++ oth non-aq 930°C 100% U 1959BGh (6721) 61
K5K6=1.22
Method:freezing point. Medium: liquid Na3AlF6,930-1008 C. Ion fraction units K5K6=1.4 to 1.5 in x units

---

Al+++ sp oth/un ? var U K1=6.4 1959BSg (6722) 62

Al+++ EMF KNO3 25°C 0.53M U I K1=6.16 B2=11.21 1959KGa (6723) 63
K3=3.91

K4=2.71
K5=1.46?
In NH4NO3 K3=3.57, K4=2.64, K5=1.46, K6=0.04?

Al+++ cal oth/un 25°C 0.07M U H 1959KGa (6724) 64
DH(K1)=4.4 kJ mol-1, DS=141 J K-1 mol-1. DH(K2)=3.9, DS=115; DH(K3)=0.8, DS=80.3; DH(K4)=0.17, DS=51.9; DH(K5)=-1.5, DS=21

Al+++ cal none 25°C 0.0 U H 1959SCe (6725) 65
DH(K1)=4.9 kJ mol-1, DH(B2)=8.2,DH(B3)=9.1,DH(B4)=9.0,DH(B5)=9.5,DH(B6)=-5.2

Al+++ sol oth/un 25°C var U B2=9.06 1957TVa (6726) 66

Al+++ EMF none 25°C 0.0 U K1=7.00 1955PAa (6727) 67

Al+++ cal none 25°C 0.0 U H 1955PAa (6728) 68
At I=0 corr: DS(K1)=160J K-1 mol-1, DS(K2)=130, DS(K3)=84, DS(K4)=54, DS(K5)=-8.4, DS(K6)=-25. Values also at I=0.07 M

Al+++ cal oth/un 25°C var U H 1953LJa (6729) 69
DH(K1)=4.8 kJ mol-1, DS=130 J K-1 mol-1; DH(K2)=3.3, DS=110; DH(K3)=0.8, DS=75; DH(K4)=1.2, DS=54; DH(K5)=-3.1, DS=21; DH(K6)=-6.5, DS=-13

Al+++ sp KNO3 ? 0.10M U K1=6.32 1950KLb (6730) 70

Al+++ gl oth/un 18°C var U 1949LAa (6731) 71
B6=ca.27
Ks(Al2F6(s)=Al+AlF6)=-9.4

Al+++ EMF KNO3 25°C 0.53M U K1=6.13 B2=11.15 1943BOa (6732) 72
K3=3.85
K4=2.74
K5=1.63
K6=0.47
B6=19.84. Method: quinhydrone electrode and redox
****
HPO3-- H2L Phosphite CAS 13598-36-2 (6305)
Phosphite;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ nmr NaClO4 25°C 1.0M U K1=2.01 B2= 3.24 1999MHa (7502) 73
B(Al2L2)=2.21
Method: Al nmr.

Al+++ nmr NaClO4 25°C 1.0M U 1999MHa (7503) 74
K(Al+HL)=2.01
K(AlHL+HL=AlH2L2)=1.23
K(2AlHL=Al2H2L2)=2.21
Method: nmr. L is H2PO3-.

Al+++ nmr NaNO3 20°C 0.10M C K1=6.11 1991FWa (7504) 75
Method: 31P nmr.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	nmr	NaClO4	25°C	1.0M	U	H	K1=2.01	B2= 3.29	1999MHa (7634)	76
							K3=1.26			
							B(Al2L2)=1.11			

Method: Al nmr. DH(K1)=9.3 kJ mol-1, DS=69 J K-1 mol-1. DH(K2)=7.1,
DS(K2)=48. DH(K3)=-0.3, DS(K3)=26. DH(Al2L2)=46, DS(Al2L2)=175.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	nmr	NaClO4	25°C	1.0M	U	H	K1=2.01	B2= 3.29	1999MHa (7635)	77
							K3=1.26			
							K(2AlL=Al2L2)=1.11			

Method: nmr. DH(K1)=9.3 kJ mol-1, DS=69 J K-1 mol-1.
DH(K2)=7.1, DS=48; DH(K3)=-0.3, DS=26; DH(Al2L2)=46, DS=175.

Al+++ nmr NaNO3 20°C 0.10M C K1=2.38 1991FWa (7636) 78
Method: 31P nmr.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	con	non-aq	-78°C	100%	U	I			1977GPa (7883)	79
							K(2AlI3=AlI2+AlI4)=-8.15			

Medium: CH3I

****

MoO4-- H2L Molybdate (443)
Molybdate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	NaCl	25°C	0.60M	C				1989OHa (8710)	80
							B(AlH6L6)=50.95			
Al+++	EMF	oth/un	25°C		U				1971GLa (8711)	81
							B6=ca.19			

****

OH- HL Hydroxide (57)
Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sol	oth/un	50°C	var	C	T H			2004TSa (10887)	82

Ks(Al(OH)3+OH=Al(OH)4)=-0.83
Solubility of gibbsite or boehmite in NH3/NH4Cl at 50-200 C. At 78 C: K's(AlOOH+OH+H2O=Al(OH)4)=-0.88; at 150 C, K's=-0.45, at 200 C,-0.11

Al+++ gl KCl 25°C 0.10M C I 2001DJa (10888) 83
*K1=-4.81
*B(3,4)=-13.82
*B3=-14.17
*Ks(Al(OH)3)=10.38
Medium: 0.10 M LiCl, 0.005 M CTAB. Kw=-13.12. In 0.10 M LiCl, 0.001 M Tiron, Kw=-13.40. In 0.010 M LiCl, Kw=-13.50

Al+++ sol NaCl 100°C 0.10M C 2001PBa (10889) 84
*Kso(AlOOH)=4.20
*B4=-21.16
Solubility of boehmite in 0.1-5.0 m NaCl at 100-290 C, using a Pt/H2 conc cell. At I=0, *Kso=3.46. Ks(AlOOH+2H2O=Al(OH)4+H)=-12.76 (-13.02 at I=0)

Al+++ sol NaCl 25°C 0.03M C 2001PBb (10890) 85
*B2=-10.73
*B3=-15.46
*B4=-22.78
Calc from solubility of synth boehmite in 0.03 m NaCl using a Pt/H2 conc'n cell. Data for at 100-290 C. At 100 C, *B2=-6.76, *B3=-10.95, *B4=-16.48.

Al+++ gl NaCl 37°C 0.15M C 2000GKb (10891) 86
*B4=-21.031

Al+++ gl KCl 30°C 3.0M C 2000STc (10892) 87
*B(2,2)=-6.68
*B(3,6)=-20.90
*B(13,32)=-104.45
*B(13,35)=-117.78

Al+++ gl NaClO4 25°C 1.0M C I 1999CIb (10893) 88
B(1,1)=-5.48
B(1,2)=-10.3
B(2,2)=-8.0
B(3,4)=-13.47
B(13,32)=-104.8, B(pq):pAl+qH2O=ALp(OH)(q-r)+qH

Al+++ sp NaClO4 25°C 8.0M U 1998SCa (10894) 89
*B(4,3)=-11.7
*B(4,2)=-25.9
*B(5,4)=-35.4
*B(5,3)=-17.0
Medium: 8 M NaClO4. *B(6,5)=-45.1, *B(6,4)=-31.1, *B(6,3)=-16.9, *B(7,5)=-40.7.

Al+++ gl NaCl 25°C 0.01M C 1997OWa (10895) 90

*Kso(Al(OH)3)=10.35 (fresh)
*Kso(Al(OH)3)=9.0 (48 h)
Fresh indicates precipitate immediately after flashing reactants (10mM Al and 30 mM NaOH) together (I=0.015 M).

Al+++ oth none 400°C 0.00 C T 1995ANa (10896) 91
Kso(AlO1.5)=-5.666
K(Al(OH)3=Al(OH)4+H)=-3.359
From literature data on solubility of corundum (AlO1.5) in H2O and KOH. Data for 400-700 C at 2000 bar.

Al+++ gl oth/un 25°C 0.10M C 1995DJa (10897) 92
*K1=-5.62
*B2=-9.74
K(3Al+4H2O=Al3(OH)4+4H)=-13.7
Medium: LiCl

Al+++ sol NaCl 25°C 0.01M U T 1994SHa (10898) 93
K(Al(OH)3(s)+3H=Al+3H20)=8.02
Gibbsite (Al(OH)3(s)) solubility measurements. Constant at I=0

Al+++ sol NaCl 25°C 0.10M C 1994WPa (10899) 94
*Kso=8.31
*Kso=7.74 (I=0)
Gibbsite solubility study using H electrode. Data for 50-100 C, 0-5 M NaCl extrapolated to 0 and 25 C. At I=0.1 M *K1=-5.31,*K2=-5.8,*K3=-6.8,*K4=-5.4

Al+++ sol oth/un 150°C var M TI 1993BKa (10900) 95
*K1=-2.1
*B2=-4.8
*B3=-7.8
*B4=-13.6
Boehmite solubility study at 150,200,250 C and P=10 bars.
K(AlO(OH)(s)+3H=Al+3H2O)=1.53

Al+++ sol none 170°C 0.0 C T 1993CDc (10901) 96
K(AlOOH(s)+3H=Al+2H2O)=0.81
K(AlOOH(s)+2H=AlOH+H2O)=-0.95
K(AlOOH+H=Al(OH)2)=-3.78
K(AlOOH+H2O=Al(OH)3)=-6.76
AlOOH is Boehmite. Data for 90-350 C. K(AlOOH+2H2O=Al(OH)4+H)=-11.75.
*K1(Al)=-1.765, *K2=-2.82, *K3=-2.98, *K4=-4.99.

Al+++ EMF NaCl 25°C 0.10M C TIH 1993PWa (10902) 97
*K1=-5.31
Data at I=0.1,0.3,1.0 and 5.0 M. 25-125 C. DH(*K1)=54.4 kJ mol-1.
H electrode. Using Pitzer evaluation. *K1(I=0)=-4.95

Al+++ sol none 80°C 0.0 C 1992NLa (10903) 98
K(Al(OH)3(s)+3H=Al+3H2O)=5.00

Al(OH)3(s) is gibbsite.

Al+++ sol NaCl 50°C 0.10M C TIH 1992PWa (10904) 99
*Ks(Al(OH)3+3H)=6.919
Gibbsite solubility study using H electrode.I=0.1-5.0 M(NaCl), 30,50,70 C.
Pitzer ion interaction treatment of data. DH(*Kso)=-101.8 kJ mol-1

Al+++ EMF oth/un 25°C var C TIH 1992WEa (10905) 100
K(Al(OH)4=Al(OH)3(s)+OH)=1.143
I=0.01-5.0 M, 6.4-80 C. Gibbsite solubility studies. DH(K)=-22.5 kJ mol-1

Al+++ gl NaCl 25°C 3.0M U 1991MBa (10906) 101
*B(2,2)=-7.53
*B(2,4)=-16.50
*B(3,4)=-13.44

Al+++ gl NaNO3 25°C 3.0M C 1991MBe (10907) 102
*B(2,2)=-7.55
*B(2,4)=-16.41
*B(3,4)=-13.24

Al+++ gl NaCl 25°C 0.60M C 1990MOa (10908) 103
*B(13,32)=-105.5

Al+++ gl NaNO3 25°C 0.50M C 1989DJa (10909) 104
*K1=-5.65
*B(2,2)=-7.03
*B(2,4)=-15.65
*B(3,4)=-12.60

Al+++ gl NaCl 25°C 0.60M C 1989OHa (10910) 105
K(Al+3H2O=Al(OH)3(s)+3H)=-10.5

Al+++ gl NaCl 25°C 0.60M C 1989OHa (10911) 106
*Kso(Al(OH)3)=10.49 (4 h)
Precipitate aged for 4 hours.

Al+++ cal none 25°C 0.0 C 1988HHc (10912) 107
B4=32.76
Heat capacity measurements on NaAl(OH)4 solutions and Al+++ solutions
at 10-55 C. At 0 C: B4=33.71; at 50 C: B4=32.19.

Al+++ gl NaCl 25°C 3.00M C 1987HSa (10913) 108
*K1=-5.52
*B(3,4)=-13.96
*B(13,32)=-113.35

Al+++ sol oth/un 505°C var M M 1987SMe (10914) 109
B(1,3,3)=30.69
B(1,2,2)=20.80

```
                                        B(1,1,2)=16.24
B(1,y,x): Al(OH)4+yF+xH=Al(OH)(4-x)Fy+xH2O. Solubility using pH and pF elec.
-------------------------------------------------------------------------------
Al+++      gl  NaCl   37°C 0.15M C        K1=8.577       1987VBa (10915) 110
                                        B(AlL3)=26.138
                                        B(AlL4)=29.044
                                        B(Al3L11)=91.025
                                        B(Al6L15)=149.278
Constants also reported for data restricted to pH<8
-------------------------------------------------------------------------------
Al+++      nmr none   20°C  0.0  U                      1985AEa (10916) 111
                                        *K1=-4.93
-------------------------------------------------------------------------------
Al+++      gl  NaNO3  25°C 0.10M C                      1985BSa (10917) 112
                                        *B1=-5.33
                                        *B2=-10.91
                                        *B(3,4)=-13.13
                                        *B(13,32)=-107.47
-------------------------------------------------------------------------------
Al+++      EMF NaCl   25°C 0.60M C                      1985OSb (10918) 113
                                        *Kso(Al(OH)3)=11.2 (20 h)
Precipitate aged for 20 h.
-------------------------------------------------------------------------------
Al+++      dis oth/un 25°C  var  U T H                  1984CMc (10919) 114
                                        *K1=-5.00
                                        *B4=-22.20
20-70 C. DH(*K1)=49.4 kJ mol-1; DH(*B4)=177.6 kJ mol-1
-------------------------------------------------------------------------------
Al+++      oth none   25°C    0  U                      1984DYa (10920) 115
                                        *K1=-5.0
                                        *K2=-5.3
                                        *K3=-5.9
                                        *K4=-6.0
Recalc. of lit. data. B4=-22.24; *Kso(Gibbsite)=8.11, Ks(Al(OH)3=Al(OH)3)=
-8.13, Ks(Al(OH)3+2H)=3.12, Ks(Al(OH)3+H)=-2.22,Ks(Al(OH)3=Al(OH)4+H)=-14.13
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                      1983OSb (10921) 116
                                        *B4=-23.46
-------------------------------------------------------------------------------
Al+++      oth none   80°C  0.0  C T H                  1981CHa (10922) 117
                                        Ks(AlOOH(s)+OH=Al(OH)4)=-0.70
Calculations based on literature solubility data for boehmite, AlOOH.
Ks(AlOOH(s)+2H2O=Al(OH)4+H)=-13.30; DH=51.9 kJ mol-1. Data for 80-300 C.
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                      1981OFa (10923) 118
                                        *K1=-5.52
                                        *B(3,4)=-13.57
                                        *B(13,32)=-109.2
-------------------------------------------------------------------------------
Al+++      gl  oth/un 25°C  6.0M U                      1980BCa (10924) 119
```

```
                                        *K1=-5.5
                                        *B3=-10.1
                                        *B(13,36)=-105
Additional method: 27Al nmr. Medium: 0.5 M AlCl3.
Polymer is Al13O4(OH)28
-------------------------------------------------------------------------------
Al+++      sol none   25°C  0.0  U                      1979MHa (10925) 120
                                        *Kso=8.11
                                        *Ks(Al(OH)3+2H)=3.12
                                        *Ks(Al(OH)3+H)=-2.02
                                        K(Al(OH)4+H)=14.0
-------------------------------------------------------------------------------
Al+++      oth oth/un 20°C    ?  U                      1979STa (10926) 121
                                        Kso(Al(OH)3)=-32.60
                                        K(Al(OH)3(s)=Al(OH)2+OH)=-12.6
                                        *B2=-8.30
Medium: seawater. Method: Tyndallometry
-------------------------------------------------------------------------------
Al+++      oth none   25°C  0.0  U                      1977VLa (10927) 122
                                        B3=33.96
-------------------------------------------------------------------------------
Al+++      kin none   25°C  0.0  U  I                   1975TUa (10928) 123
                                        *K1=-5.17
                                        *B(2,2)=-6.95
                                        *B(13,32)=-100.7
Further data available for NaCl concentrations of 0.003 to 0.06M
-------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.10M U  I     K1=9.10   B2=17.65  1974NBe (10929) 124
                                        B3=25.75
K1=9.40, B2=18.27, B3=26.75(I=0.3).  K1=9.70, B2=18.88, B3=27.62(I=0.5).
K1=10.4, B2=20.42, B3=30.16(I=1) Error in abstract?
-------------------------------------------------------------------------------
Al+++      sol R4N.X  25°C       U  I                   1973CHc (10930) 125
                                        Kso(Al(OH)3(s)=Al+3OH)=-30.55
Medium: NH4Cl. In LiCl, Kso=-33.15. In NaCl, Kso=-30.75. In KCl, Kso=-30.36.
In CaCl2, Kso=-31.00
-------------------------------------------------------------------------------
Al+++      sol oth/un 23°C 0.10M U                    1972IYa (10931) 126
                                        Kso(Al(OH)3(s)=Al+3OH)=-32.94
*Ks(Al(OH)3(s)+H2O=Al(OH)4+H)=-12.23 at 20 C
-------------------------------------------------------------------------------
Al+++      gl  KCl    20°C 0.10M U       K1=12.3        1972SKa (10932) 127
                                        B3=32.0
                                        B4=36.6
-------------------------------------------------------------------------------
Al+++      sol oth/un 30°C       U                    1971DBa (10933) 128
                                        *Ks(AlL3(s)+H)=2.59
                                        K(Al(OH)3(s)=Al(OH)3)=-3.92
                                        Ks(Al(OH)3+H2O=Al(OH)4)=-12.62
                                        *Kso=11.40
```

```
---------------------------------------------------------------------------
Al+++      EMF KCl    62°C 1.00M U   H                    1971MBc (10934) 129
                                      *B(2,2)=-5.90
                                      *B(3,4)=-10.74
DH(*B(2,2))=76.6 kJ mol-1 ,DS=113 J K-1 mol-1. DH(*B(3,4))=129.3, DS=176;
DH(*B(14,34))=1100, DS=1577
---------------------------------------------------------------------------
Al+++      EMF KCl    99°C 1.00M U T                      1971MBc (10935) 130
                                      *B(2,2)=-4.81
                                      *B(3,4)=-8.20
                                      *B(14,34)=-67.9
At 150 C: *B(2,2)=-3.95, *B(3,4)=-7.01, *B(14,34)=-55.7
---------------------------------------------------------------------------
Al+++      gl  oth/un 25°C 0.07M U  IH                    1971VPa (10936) 131
                                      *K1(Al+H2O=AlOH+H)=-5.20
DH(*K1)=11.13 kJ mol-1. *K1=-5.11(I=0.0025), -5.23(I=0.01), -5.20(I=0.02),
-5.30(I=0.03), -5.30(I=0.05)
---------------------------------------------------------------------------
Al+++      gl  none   25°C 0.00  U   H                    1971VPa (10937) 132
                                      *K1=-4.99
*DH(*K1)=11.42 kJ mol-1. Data also 10 C, 15 C, 20 C, 30 C, 35 C, 40 C
---------------------------------------------------------------------------
Al+++      sol none   25°C 0.00  U T H                    1970BSd (10938) 133
                                      Ks(Al(OH)3(s)+OH=Al(OH)4)=-1.3
DH(Ks)=34.7 kJ mol-1. Ks=-1.05(35 C), -0.78(50 C), -0.63(60 C)(gibbsite)
---------------------------------------------------------------------------
Al+++      gl  diox/w 25°C  55%  U                      1970OHa (10939) 134
                                      *B(2,2)=-6.95
                                      *B(3,2)=-10.02
Medium: 55% w/w dioxan/H2O, 3 M LiClO4
---------------------------------------------------------------------------
Al+++      gl  NaNO3  30°C 2.00M U T                      1969CBc (10940) 135
                                      *B(8,4)=-27.0
                                      *B(16,7)=-52.7
At 50 C, *B(4,8)=-25.5, *B(7,16)=-48.5
---------------------------------------------------------------------------
Al+++      gl  none   30°C 0.00  U                      1969GFa (10941) 136
                                      *K1=-4.61
                                      *B(2,2)=-7.44
---------------------------------------------------------------------------
Al+++      kin none   15°C 0.00  U                      1969GFa (10942) 137
                                      *K1=-5.11
                                      *B(2,2)=-8.03
---------------------------------------------------------------------------
Al+++      oth none   50°C  0.0  U T      K1=9.4         1969HEa (10943) 138
                                      B4=32.3
Method:Literature.K1=9.5(60C),10.0(100C),10.8(150C),11.9(200C),13.1(250C)
14.7(300C),B4=32.2(60C+100C),33.0(150C),34.6(200C),36.7(250C),39.5(300C)
---------------------------------------------------------------------------
Al+++      oth none   60°C  0.0  U T                    1969HEa (10944) 139
```

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                                        *Kso=6.17
Method:Estimated data. *Kso=4.62(100 C), 3.16(150 C), 2.15(200 C),
1.36(250 C), 0.76(300 C) (gibbsite)
-------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.10M U       K1=9.02   B2=17.59  1969NNc (10945) 140
                                        B3=25.73
-------------------------------------------------------------------------------
Al+++      sol oth/un 25°C 0.00  U                     1969RPa (10946) 141
                                        K(Al(OH)3(s)=Al(OH)2+OH)=-15.0
                                        *Ks(Al(OH)3(s)+OH)=-14.40
-------------------------------------------------------------------------------
Al+++      sol oth/un 25°C       U T                   1969SBf (10947) 142
                                        Kso(Al(OH)3(s)=Al+3OH)=-33.7
Kso=-33.9(20 C), -33.4(30 C)
-------------------------------------------------------------------------------
Al+++      oth oth/un 25°C  dil  U                     1968HCa (10948) 143
                                        *K1=-4.5
Medium: AlCl3 dil. Method: Dissociation field effect relaxation
-------------------------------------------------------------------------------
Al+++      kin NaClO4 25°C 1.00M U                     1968SRc (10949) 144
                                        *K1=-4.31
-------------------------------------------------------------------------------
Al+++      gl  oth/un   ?        U                     1967FSb (10950) 145
                                        Kso(Al(OH)3(s)=Al+3OH)=-31.8
Al(OH)3: gibbsite
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 2.00M U                     1965AVa (10951) 146
                                        *B(2,2)=-7.07
                                        *B(13,32)=-104.5
-------------------------------------------------------------------------------
Al+++      con none   25°C  0.0  U                     1965NTa (10952) 147
                                        *K1=-4.5
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 3.00M U                     1964BIb (10953) 148
                                        *B(7,17)=-48.8
                                        *B(13,34)=-97.6
-------------------------------------------------------------------------------
Al+++      sol none   25°C  0.0  U                     1964PCa (10954) 149
                                        K(Al(OH)3(s)+OH=Al(OH)4)=-0.68
                                        *Kso=9.57
                                        *Ks(Al(OH)3+2H=AlOH+2H2O)=5.27
                                        *K(Al(OH)3+H=Al(OH)2+H2O)=1.01
Kso(Al(OH)3(s)=M+3OH)=-32.43, *K1(Al+H2O=AlOH+H)=-4.3
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 50°C  3.0M U                     1964PCa (10955) 150
                                        *B(17,7)=-48.8
                                        *B(34,13)=-97.6
-------------------------------------------------------------------------------
Al+++      con none   25°C  0.0  U                     1963FPc (10956) 151
                                        *K1(Al+H2O=AlOH+H)=-5.02
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---------------------------------------------------------------------------
Al+++      sol none   25°C 0.00  U                      1963RAa (10957) 152
                                      *Ks=-12.45 for boehmite
                                      *Ks=-13.84 for bayerite
                                      *Ks=-14.57 for gibbsite
*Ks: Al(OH)3(s) + H2O=Al(OH)4 + H
---------------------------------------------------------------------------
Al+++      sol none   25°C 0.00  U                      1962FPa (10958) 153
                                      Kso(Al(OH)3(s)=Al+3OH)=-33.5
Al(OH)3:gibbsite
---------------------------------------------------------------------------
Al+++      con none   25°C  0.0  U                      1960FRa (10959) 154
                                      *K1(Al+H2O=AlOH+H)=-5.02
                                      Kso(Al(OH)3=Al+3OH)=-33.51
Gibbsite. Also pH and solubility
---------------------------------------------------------------------------
Al+++      gl  oth/un 25°C  dil  U                      1960GOb (10960) 155
                                      *Ks(Al(OH)3+OH)=-12.6
                                      *Ks(Al(OH)3+2H=AlOH+2H2O)=5.73
                                      Ks(Al(OH)3=AlOH+2OH)=-22.28
---------------------------------------------------------------------------
Al+++      sol none   25°C  0.0  U                      1958GTa (10961) 156
                                      Ks(Al(OH)3(s)+OH=Al(OH)4)=-0.5
                                      *Ks(Al(OH)3+H=Al(OH)2+H2O)=0.4
                                      *Kso(Al(OH)3+3H=Al+3H2O)=9.04
                                      Kso(Al(OH)3=Al+3OH)=-32.96
---------------------------------------------------------------------------
Al+++      gl  none     ?   0.0  U                      1957MOa (10962) 157
                                      Kso=-33.45
---------------------------------------------------------------------------
Al+++      oth none   25°C  0.0  U                      1956DPa (10963) 158
                                      *Kso=9.66(Al(OH)3 amorphous)
                                      *Kso=8.55(alpha-Al2O3)
                                      *Kso=7.98(AlOOH,boehmite)
                                      *Kso=6.48(Al(OH)3,bayerite)
*Kso(Al(OH)3(s)+3H=Al+3H2O)=5.70(hydrargillite); *K(Al+4H2O=Al(OH)4+4H)=20.3
---------------------------------------------------------------------------
Al+++      oth none   25°C  0.0  U                      1955KEa (10964) 159
                                      *K1(Al+H2O=AlOH+H)=-4.96
                                      *B(2,2)=-7.55
*B(2,2): 2Al+2H2O=Al2(OH)2+2H. Method: freezing point etc.
---------------------------------------------------------------------------
Al+++      EMF oth/un 20°C  var  U T                    1955SCc (10965) 160
                                      Kso(Al(OH)3)=-32.90
                                      *Ks(Al(OH)3+OH)=-12.74
Kso=-31.72, *Ks=-12.87(30 C). Method: Sb electrode
---------------------------------------------------------------------------
Al+++      gl  oth/un 20°C 0.60M U  I                   1954FAa (10966) 161
                                      *K1(Al+H2O=AlOH+H)=-5.97
                                      *B(2,2)=-8.24
```

Medium: Ba(NO3)2. In 0.12 M Ba(NO3)2 *K1=-5.74, *B(2,2)=-8.06

Al+++ gl none 25°C 0.0 U T 1954STa (10967) 162
*K1(Al+H2O=AlOH+H)=-4.98
*K1=-5.28(15 C),-5.15(20 C)

Al+++ gl none 25°C 0.0 U 1953IYa (10968) 163
*K1(Al+H2O=AlOH+H)=-5.10

Al+++ gl oth/un 22°C var U 1953KFa (10969) 164
Kso(Al(OH)3)=-29.92

Al+++ EMF none 18°C 0.0 C I 1950AFa (10970) 165
Kso(Al(OH)3)=-31.7
Method: H electrode. By solubility, dil. soln., B3=26.96

Al+++ gl oth/un 18°C 0.01M U I 1949LAa (10971) 166
*K1(Al+H2O=AlOH+H)=-4.60
Kso(Al(OH)3(s)=Al+3OH)=-33.8
At I=0 corr: *Ks(Al(OH)3+OH)=-13, *Kso(Al(OH)3)=-34.0

Al+++ oth oth/un 20°C var U 1943CFa (10972) 167
Ks(Al(OH)3(s)+OH=Al(OH)4)=1.82
*K=-12.19

Al+++ oth oth/un ? var U 1943KTa (10973) 168
Kso=ca.-32

Al+++ cal oth/un 20°C 30% U 1942RWa (10974) 169
Medium:30% w/w NaOH. DH(Ks(Al(OH)3(s)+OH))=15.9 kJ mol-1
At 77.3 C: DH=22.8. Al(OH)3 as hydrargillite

Al+++ gl oth/un 25°C dil U 1938OKa (10975) 170
Kso(M(OH)3(s)=M+3OH)=-31.7
*Ks(Al(OH)3+OH)=-11.92

Al+++ con oth/un 25°C var U 1934MAa (10976) 171
K4=2.78
*K4=-11.22

Al+++ oth oth/un 18°C var U 1933FMa (10977) 172
Kso=-12.2(fresh)
Kso=-13.8(aged)

Al+++ EMF oth/un rt var C 1930TRa (10978) 173
*Ks(Al(OH)3(s)+OH)=-12.98

Al+++ sol oth/un 18°C 0.62M U 1929FRa (10979) 174
*Ks(Al(OH)3+OH)=-12.44(fresh)
*Ks=-13.89(after 24 h)

Al+++ con oth/un 25°C ? U T 1920HEa (10980) 175
Ks(Al(OH)3+OH=Al(OH)4)=1.54
Al(OH)3 fresh. At 25 C: K=1.85, or K=0.18(25 C,crystlline)

Al+++ oth oth/un 15°C var U 1920KOb (10981) 176
Ks(Al(OH)3(s)+OH=Al(OH)4)=1.60
*Ks=-12.40

Al+++ kin oth/un 100°C 0.01M U K1=9.49 1913KUa (10982) 177
*K1(Al+H2O=AlOH+H)=-2.88

Al+++ sol oth/un 19°C var U 1911SLa (10983) 178
Ks(Al(OH)3+OH=Al(OH)4)=-0.74
By solubility K=-0.48

Al+++ oth oth/un 25°C var U I 1908DEa (10984) 179
*K1(Al+H2O=AlOH+H)=-4.29

Al+++ kin oth/un 77°C var U T 1899LEa (10985) 180
*K1(Al+H2O=AlOH+H)=-4.12
*K1=-3.4(99.7 C). At 25 C, I=0 corr: *K1=4.85

****

PO4--- H3L Phosphate CAS 7664-38-2 (176)
Phosphate;

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

---

Al+++ gl KCl 25°C 0.20M C M K1=13.50 2001LEa (13081) 181
B(AlHL)=17.60
B(AlH2L)=19.65
B(AlH-1L)=8.37
B(Al2L)=17.42
B(Al2H-2L)=11.05, B(Al2H-3L)=6.9. For citrate: B(AlH2(cit)L)=28.46,
B(AlH(cit)L)=25.02, B(Al(cit)L)=19.68, B(AlH-1(cit)L)=12.03. Also 31P nmr.

Al+++ gl KCl 25°C 0.20M C 1996AKa (13082) 182
B(AlHL)=17.60
B(Al2L)=16.65
B(Al2H-1L)=14.21
B(Al2H-3L)=7.42

Al+++ gl NaClO4 25°C 3.00M C I 1996CIa (13083) 183
B(1,1,1)=0.13
B(1,2,2)=1.04
B(3,5,2)=-0.81
B(3,6,3)=0.23
B(p,q,r): pAl+rH3PO4=AlpH-q(H3PO4)r+qH. B(3,8,3)=-6.11, B(3,6,4)=2.62,
B(3,8,5)=0.98, B(3,6,1)=-9.60. Values at I=0.0 M calculated.

Al+++ gl NaClO4 25°C 3.0M M I 1996CIa (13084) 184
K(Al+H3L=AlH2L+L)=0.13
K(Al+2H3L=AlHL+2H)=1.04
K(3Al+2H3L=Al3HL2+5H)=-0.92
K(3Al+3H3L=Al3H3L3+6H)=0.15
K(3Al+3H3L=Al3HL3+8H)=-6.17, K(3Al+4H3L=Al3H6L4+6H)=2.69. At I=0: K(Al+H3L=AlH2L+H)=0.6, K(3Al+2H3L=Al3HL2+5H)=0.3, K(3Al+3H3L=Al3H3L3+6H)=2.5

Al+++ gl NaCl 37°C 0.15M U K1=15.32 1991DEa (13085) 185
B(AlHL)=17.79
B(AlH2L)=20.93
B(Al2L)=18.72
B(Al2H-2L)=12.58

Al+++ nmr NaNO3 20°C 0.10M C K1=17.26 1991FWa (13086) 186
Method: 31P nmr.

Al+++ gl NaCl 37°C 0.15M C K1=15.660 B2=20.88 1990DFa (13087) 187
B(AlHL)=19.072
B(AlH2L)=22.247
B(AlH-2L2)=15.796
B(AlH-3L2)=6.667

Al+++ gl NaCl 25°C 0.15M C 1988JVa (13088) 188
B(AlHL)=23.25
B(AlH2L)=26.18
B(AlHL2)=37.95

Al+++ con oth/un 25°C 0.06M U 1978RPa (13089) 189
K(Al+H2PO4)=3.06

Al+++ gl NaClO4 25°C 0.10M U M 1975RMa (13090) 190
K(Al+HPO4)=9.17
K(Al+citrate+HPO4)=19.29
K(Al+NTA+HPO4)=23.89
K(Al+Cys+HPO4)=15.66

Al+++ ix R4N.X ? 0.20M U 1974FGc (13091) 191
K(2Al+H3L=Al2HL+2H)=-1.96

Al+++ sol none 25°C 0.0 U 1961TGa (13092) 192
Ks(K3Al5H-10H2L8(H2O)18)(taranakite)=-22.5 ? Ks((NH4)3Al5H-10H2L8(H2O)18)=19.3 ?. L-Al complex neglected

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Al+++ sol none 25°C 0.0 U 1959LPb (13093) 193
Ks(Al(H2L)(OH)2)=-30.5
Ks(Al(H2L)H-2(H2O)2)(variscite)=-2.48

Al+++ sol oth/un 25°C var U 1957TVa (13094) 194
Kso(AlL)=-10.41

Al+++ sol none ? 0.0 U 1955KJa (13095) 195
Ks(Al(H2L)(OH)2)=-28.0

Al+++ sol oth/un 19°C var U 1951ZHa (13096) 196
Kso(AlL)=-18.24

Al+++ sol NaCl ? 0.05M U 1950CJa (13097) 197
Kso(Al(H2L)(OH)2)=-29.55

Al+++ con oth/un 18°C 0.10M U 1931BDb (13098) 198
K(Al+H2L)=3 ?
K(AlH2L+H2L)=2.3
K(Al(H2L)2+H2L)=2.3
K(AlHL+H)=2.1
Also quinhydrone electrode. K(AlHL(H2L)+H)=2.1 and others

****

P2O7---- 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

---

Al+++ gl KCl 25°C 0.20M C K1=13.74 B2=19.77 1996AKa (13560) 199
B(AlHL)=17.03
B(AlH2L)=18.69
B(AlH-1L)=7.41
B(AlHL2)=25.64

Al+++ gl NaCl 25°C 0.15M C K1=14.30 1988JVa (13561) 200
B(AlHL)=19.20
B(AlH2L)=22.79

****

P3O10----- H5L CAS 10380-08-2 (1001)
Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2

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

---

Al+++ gl KCl 25°C 0.20M C K1=13.15 B2=19.14 1996AKa (13836) 201
B(AlHL)=16.65
B(AlH2L)=18.07
B(AlH-1L)=6.53
B(AlHL2)=24.43

Al+++ gl NaCl 25°C 0.15M C K1=17.31 1988JVa (13837) 202
B(AlHL)=20.98
B(AlH-1L)=11.72

Al+++ gl KNO3 35°C 0.10M U 1980KHc (13838) 203
K(AlL+thr)=7.55
K(AlL+ala)=7.51

K(AlL+pro)=8.63
K(AlL+val)=7.90
K(AlL+gly)=7.97. For tyrosine: K(AlL+HA)=7.95, *K(AlL(HA))=-7.15.
K(AlL+Hgly-gly)=4.18, *K(AlL(Hgly-gly))=-5.53. Data for other aminoacids.
****
P3O9--- H3L CAS 13566-25-1 (235)
Cyclotrimetaphosphate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ cal oth/un 25°C 0.10M C H K1=3.05 1983GGb (13944) 204
Medium: 0.10 M HCl. DH(K1)=19.6 kJ mol-1, DS(K1)=124 J K-1 mol-1.
****
P4O12---- H4L CAS 13598-74-8 (234)
Cyclotetrametaphosphate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ cal oth/un 25°C 0.10M C H K1=3.29 1983GGb (13996) 205
Medium: 0.10 M HCl. DH(K1)=37.8 kJ mol-1, DS(K1)=190 J K-1 mol-1.
****
S-- H2L Sulfide CAS 7783-06-4 (705)
Sulfide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ vlt oth/un 25°C 0.72M C I 1999AVb (14306) 206
K(Al+HL)=13.0
Method: determination of free S-- by cathodic stripping voltammetry.
Medium: seawater, pH 8.0, S=35. Also data for S=21 and 10.5.
****
SCN- HL Thiocyanate CAS 463-56-9 (106)
Thiocyanate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp oth/un 25°C 7.5M C K1=0.18 2001SZa (14800) 207
Method: Raman spectroscopy. Medium: NaSCN.

Al+++ cal non-aq 25°C 100% C IH K1=2.1 B2= 3.60 1996TSa (14801) 208
K3=1.4
K4=1.0
Medium: N,N-Dimethylformamide,0.20 M Et4NClO4. Also data at 0.4 M Et4NClO4
DH(K1)=9.0 kJ mol-1, DH(K2)=13, DH(K3)=0, DH(K4)=12.

Al+++ sp non-aq 25°C 100% U IH K1=2.66 1985PWa (14802) 209
Medium: dimethylsulphoxide. K1 extrapolated to I = 0.0

Al+++ sp none 22°C 0.0 U T K1=0.42 1963VMa (14803) 210
****

SO4-- H2L Sulfate CAS 7664-93-9 (15)
Sulfate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sol	none	25°C	0.0	C	T H			1999PPb (15966)	211

Ks(Ca6[Al(OH)6]2(SO4)3=6Ca+2Al(OH)4+3SO4+4OH)=-44.9. Data for 5-75 C. DH(Ks)=204.6 kJ mol-1, DS(Ks)=170 J K-1 mol-1. Solid phase is ettringite.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	EMF	NaCl	50°C	0.10M	C	T H	K1=2.3	B2= 3.90	1999RWa (15967)	212

Method: Pt/H2 electrode. Data for 0.3-1.0 M NaCl, 50-125 C. DH(K1)= -10 kJ mol-1, DS=10 J K-1 mol-1; DH(B2)=10, DS=100. At I=0, K1=3.7, B2=5.6

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	EMF	none	25°C	0.0	C	T H	K1=1.72		1989JJb (15968)	213

Method: Hg/Hg2SO4 electrode. Data for 5-35 C. DH(K1)=56.1 kJ mol-1, DS(K1)=221 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	EMF	KCl	25°C	1.00M	C	T H	K1=3.35		1988MMa (15969)	214

K1/mol-1 kg; DH(K1)=6.6 kJ mol-1, DS=86.2 J K-1 mol-1(25 C); 50 C: K1=3.59; 75 C: 4.08; 100 C: 4.66; 125 C: 5.34

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	kin	KNO3	25°C	0.01M	C		K1=3.19		1983KLa (15970)	215

Method: stopped flow, by conductivity measurement.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	cal	NaClO4	25°C	1.0M	C	T H	K1=0.45	B2= 0.76	1982LMb (15971)	216

Data for 25-70 C. DH(K1)=29.0 kJ mol-1, DH(K2)=10.3. At 70 C, K1=1.11, DH(K1)=28.4; K2=0.91, DH(K2)=47.3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sol	none	25°C	0.0	C				1982NOa (15972)	217
							Kso(alunogen)=-7.0			
							Kso(jurbanite)=-17.8			
							Kso(alunite)=-85.4			
							Kso(basaluminite)=-117.7			

Method: derived from literature data. Alunogen:Al2(SO4)3.17H2O. Jurbanite: Al(SO4)OH.5H2O. Alunite:KAl3(SO4)2(OH)6. Basaluminite:Al4(SO4)(OH)10.5H2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	nmr	oth/un	?	var	U				1972AGa (15973)	218
							K1in=-0.6			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sol	none	25°C	0.0	U				1972IYa (15974)	219
							Kso(Al(OH)2.56(L)0.22)=-29.6			

In paper,formula expressed as: Al(OH)2.66(L)0.22, printing error?

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	kin	oth/un	25°C	dil	U		K1=3.3		1971KKa (15975)	220
							K1out=3.12			
							K1in=-0.7			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	NaClO4	25°C	5.0M	U	IH	K1=1.20		1971KVa (15976)	221
							K1out=1.07			

I=1 K1=1.48; I=3 K1=1.16; I=0(corr) K1=3.89

```
--------------------------------------------------------------------------------
Al+++      EMF none   15°C  0.0  U T H    K1=1.75   B2=2.25   1970SPd (15977) 222
At 5 C: K1=1.60; 25 C: K1=1.90, K2=0.80; 35 C: K1=2.08, K2=1.05.
DH(K1)=25 kJ mol-1, DH(K2)=46
--------------------------------------------------------------------------------
Al+++      nmr oth/un 25°C  var  U                      1969AGa (15978) 223
                                      B(Al+HL)=0.5
Method:N.M.R.
--------------------------------------------------------------------------------
Al+++      cal none   25°C  0.0  U   H    K1=3.01   B2=4.90   1969IEa (15979) 224
DH(K1)=9.6 kJ mol-1, DS=89.5 J K-1 mol-1; DH(K2)=3.3, DS=47.2
--------------------------------------------------------------------------------
Al+++      sol oth/un 20°C  var  U T                    1969SBf (15980) 225
                                      Kso(Al(OH)2.5(L)0.25)=-29.5
Kso(Al(OH)2.5(L)0.25)=-29.3(25 C), -29.1(30 C)
--------------------------------------------------------------------------------
Al+++      sol none         0.0  U                      1969SIa (15981) 226
                                      Kso=ca.33 (fresh)
                                      Ks(Al(OH)2.5(L)0.25)=-28.6
--------------------------------------------------------------------------------
Al+++      oth oth/un       var  U       K1=2.57        1969SMi (15982) 227
Method: coagulation
--------------------------------------------------------------------------------
Al+++      con oth/un 25°C  0.0  U       K1=3.73        1965NTa (15983) 228
--------------------------------------------------------------------------------
Al+++      kin oth/un 25°C 0.10M U                      1963BLa (15984) 229
                                      K(Al(aq)+L(aq)=Al(H2O)L)=1.28
                                      K(Al(H2O)L=AlL)=-1 to -2
Method: pressure jump
--------------------------------------------------------------------------------
Al+++      EMF NaClO4 25°C 0.60M U  I     K1=1.30   B2=2.30   1962BWa (15985) 230
Method: Pb electrode. At I=0 corr. K1=3.2, K2=1.0
--------------------------------------------------------------------------------
Al+++      sp  oth/un 30°C  0.0  U       K1=2.04        1962NAc (15986) 231
********************************************************************************
SiO3--                H2L    Silicate         CAS 7699-41-4  (747)
Silicate; SiO2(OH)2--
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C T H                  1996PSb (17194) 232
                                      K(Al+H4SiO4=AlH3SiO4+H)=-2.38
Data for 90 and 150 C. DH(Al+H4SiO4)=66.66 kJ mol-1, DS(Al+H4SiO4)=
177 J K-1 mol-1.
--------------------------------------------------------------------------------
Al+++      nmr oth/un  RT   4.0M C                      1995LMd (17195) 233
Ks(Al(OH)2SiO2(OH)(s)+2OH=HSiO3+Al(OH)4)=-3.0
Method: 27Al nmr. Medium: 4.0 M NaOH.
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C  0.0  M                      1994FLa (17196) 234
```

K(Al+H2L=AlHL+H)=-2.50

Al+++ sol NaCl 25°C 0.01M U T 1994SHa (17197) 235
*Ks(imogolite)=13.04
*Ks(imogolite):K(Al2SiO3(OH)4(s)+6H=2Al+Si(OH)4+3H2O). Constant at I=0

Al+++ sol NaNO3 25°C 0.10M U 1986MKa (17198) 236
*Ks(kaolinite)=7.42
*Ks(kaolinite):Al2Si2O3(OH)4(s)+6H=2Al+2Si(OH)4+3H2O. Constants at I=0 corr
---
Al+++ oth none 60°C 0.0 U T 1969HEa (17199) 237
*Ks(Al2Si2O5(OH)4+6H)=4.75
Method: estimated data.(kaolinite,Al2Si2O5(OH)4).
*Ks=2.27(100 C); -0.12(150 C); -1.72(200 C); -2.98(250 C); -4.02(300 C)

Al+++ oth none 60°C 0.0 U T 1969HEa (17200) 238
*Ks(Al2Si2O5(OH)4+6H)=5.63
Method: estimated data.(dickite,Al2Si2O5(OH)4).
*Ks=3.10(100 C); 0.69(150 C); -0.90(200 C); -2.13(250 C); -3.09(300 C)

Al+++ oth none 60°C 0.0 U T 1969HEa (17201) 239
*Ks(Al2Si2O5(OH)4+6H)=8.03
Method: estimated data.(halloysite,Al2Si2O5(OH)4).
*Ks=5.21(100 C); 2.50(150 C); 0.67(200 C); -0.75(250 C); -1.89(300 C)

Al+++ oth none 150°C 0.0 U T 1969HEa (17202) 240
Method:estimated data.*Kso(K0.6Mg0.25Al2.3Si3.5O10(OH)2+8H)=0.81,6.85(60 C),
3.82(100 C),-1.23(200 C),-2.87(250 C),-4.29(300 C),(illite)

Al+++ oth none 150°C 0.0 U T 1969HEa (17203) 241
Method:est.data. *Ks(KFe3AlSi3O10(OH)2+10H)=10.8. *Ks=18.7(60 C),14.7(100 C)
8.0(200 C), 5.8(250 C), 3.9(300 C),(annite).

Al+++ oth none 150°C 0.0 U T 1969HEa (17204) 242
*Kso=-2.37
Method:estimated data. *Kso(montmorillonite):(K0.33Al2.33Si3.67O10(OH)2(s)+
12.7H).Also at 60-300 C: 3.00(60 C); 0.31(100 C); -4.17(200 C); -6.9(300 C).

Al+++ gl oth/un 400°C dil U I 1961HMa (17205) 243
K=3.0
K: Na-feldspar(s)+H=Na-mica,paragonite(s)+3SiO2(s)+Na. Also other equilibria
---
Al+++ oth oth/un 200°C var U 1959HEa (17206) 244
K=4.9
By chemical analysis. P=1000 atm. Data also for mica to kaolinite etc.
K(1.5K-feldspar+H=0.5K-mica+3SiO2(s)+K)=3.55(300C), 2.7(400C), 2.1(500C).
****
CH2O2 HL Formic acid CAS 64-18-6 (37)
Methanoic acid; H.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	kin	KNO3	25°C	0.01M	C		K1=1.28	1983KLa (17588)	245

Method: stopped flow, by conductivity measurement.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaNO3	25°C	1.0M	U		B2=2.02	1976KIb (17589)	246
Al+++	gl	NaNO3	25°C	1.00M	U		K1=1.3	1975KIb (17590)	247
Al+++	oth	oth/un	25°C	1.00M	U		K1=0.56 B2=1.76	1973TRc (17591)	248
Al+++	ix	oth/un	25°C	1.0M	U		K1=1.78	1962TSa (17592)	249

****

CH4O L Methyl alcohol CAS 67-56-1 (597)

Methanol; CH3.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	EMF	alc/w	20°C	100%	U		K(2Al+3H-1L=Al2(H-1L)3)=42.0 K(Al2(H-1L)3+H-1L)=11.1 K(Al(H-1L)2+H-1L=10.5 K(Al(H-1L)3+H-1L=5.5	1964GUa (17874)	250

Method: H electrode. Medium: MeOH, 1.0 M Me4NCl

****

CH5O3P H2L CAS 13590-71-1 (1752)

Methylphosphonic acid; CH3.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=6.48 B2=12.3 B(AlH-1L)=2.33 B(AlH-2L)=-3.91 B(AlH-1L2)=5.8	1996AKa (18122)	251

****

CH6O6P2 H4L Medronic acid CAS 1984-15-2 (2384)

Methanediphosphonic acid; CH2(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	U		K1=14.08 B2=23.01 K(Al+HL)=9.05 K(Al+2HL)=13.66	1967KLa (18274)	252

****

C2H2O3 HL Glyoxylic acid CAS 298-12-4 (1142)

Glyoxylic acid; OHC.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	U		K1=13.5 B2=22.80	1975SDa (18416)	253

****

C2H2O4 H2L Oxalic acid CAS 144-62-7 (24)
Ethanedioic acid; (COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	EMF	NaCl	25°C	0.60M	C	M	B(AlLF)=11.53 B(AlLF2)=15.67 B(AlL2F)=15.74 B(AlL2F2)=19.09	2003BTa (18777)	254
Method: quinhydrone electrode and fluoride ISE.									
Al+++	gl	NaClO4	25°C	1.0M	C	I	K1=6.03 B2=11.05 B3=15.02 B(2,2,2)=5.14; B(336)=-21.41 B((7,17,3)=-43.2; B(353)=-0.87 B(2,2,3)=-9.47	1999CIb (18778)	255
At I=0 (by SIT): K1=8.3, B2=14.1, B3=17.2 B(pqr):pAl+qH2O+rL=ALp(OH)(q-r)Lr+qH									
Al+++	sol	oth/un	80°C	var	U	M	K1=8.3 B3=18.1	1994FHa (18779)	256
Alternatively data may be explained with formation of Al(OH)2L and Al(OH)L									
Al+++	sol	NaCl	25°C	0.60M	C		B(-9,3,1,0)=-21.87 B(-4,1,1,1)=-5.61	1986BHc (18780)	257
B(-9,3,1,0):3Al+H2L=Al3(OH)7L(s)+9H; B(-4,1,1,1):Na+Al+H2L=NaAl(OH)2L(s)									
Al+++	gl	NaCl	25°C	0.60M	C	M	B(-1,1,1)=1.40 B(-2,1,1)=1.43 B(-4,1,2)=1.85 B(-6,1,3)=1.26	1985SOa (18781)	258
B(-9,3,3)= -4.28; B(-10,2,4) = -4.62. B(p,q,r) for pH+qAl+r(H2L)=HpAlq(H2L)r									
Al+++	gl	NaCl	37°C	0.15M	C		K1=5.02 B2=9.33 B3=12.41 B(AlHL)=6.63 B(AlH-1L2)=7.07 B(AlH-1L3)=9.52	1982JCa (18782)	259
Al+++	nmr	none	25°C	0.0	U		K1=7.18 B2=13.49 B3=17.53	1977JBb (18783)	260
Al+++	vlt	NaClO4	25°C	1.00M	U		K1=4.90	1970GMi (18784)	261
Al+++	gl	NaClO4	25°C	1.00M	U		K1=4.85	1970GMi (18785)	262

```
Al+++      EMF NaClO4 25°C 1.00M U        K1=6.06   B2=11.09  1968BCa (18786) 263
                                          B3=15.12
-------------------------------------------------------------------------------
Al+++      dis NaClO4 20°C 0.10M U                    1963STc (18787) 264
                                          B3=15.60
-------------------------------------------------------------------------------
Al+++      gl  oth/un   ?     ?  U        K1=7.26   B2=12.11  1957BDc (18788) 265
                                          K3=1.31
-------------------------------------------------------------------------------
Al+++      gl  KNO3   32°C  1.0M U        K2=5.45        1957DSa (18789) 266
                                          K3=3.69
-------------------------------------------------------------------------------
Al+++      gl  none   18°C  0.0  U        B2=13          1949LAb (18790) 267
                                          B3=16.3
*******************************************************************************
C2H3NO4                HL                     CAS 625-75-2  (2968)
Nitroacetic acid; O2N.CH2.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      kin oth/un 18°C 0.20M U        K1=0.48        1949PEa (19206) 268
Medium: Ba(NO3)2
*******************************************************************************
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
-------------------------------------------------------------------------------
Al+++      sol oth/un 60°C 0.02M M TI     K1=2.33   B2=4.10   1994BCa (19881) 269
Measurements at 60-200 C
-------------------------------------------------------------------------------
Al+++      EMF NaCl   25°C 0.10M C TIH    K1=2.02   B2=3.5    1994PBa (19882) 270
Measurements at 25-150 C and I=0.1-1.0 M. Pitzer formalism and equations.
DH(K1)=17 kJ mol-1; DH(B2)=40 kJ mol-1
-------------------------------------------------------------------------------
Al+++      sol oth/un 80°C  var  U        K1=2.9    B2=4.8    1991FEa (19883) 271
Gibbsite solubility measurements.Constants at I=0
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                    1989MOa (19884) 272
                                          K(2Al+HL=Al2(OH)2L+3H)=-7.98
-------------------------------------------------------------------------------
Al+++      gl  NaNO3  25°C 1.00M U        K1=1.4         1975KIb (19885) 273
*******************************************************************************
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
-------------------------------------------------------------------------------
Al+++      gl  NaCl   37°C 0.15M C                    2002DCa (21487) 274
                                          B(Al2H-2L)=0.361
```

Al+++ gl KCl 25°C 0.20M C K1=5.91 1997KSa (21488) 275
B(AlH-1L)=1.08
B(Al2H-1L)=4.35

Al+++ gl NaNO3 25°C 0.50M C 1989DJa (21489) 276
B(Al2H-2L2)=6.56
B(AlH-3L)=-7.53

Al+++ oth NaClO4 35°C 0.01M U 1984YSa (21490) 277
B3=19.40
Method: paper electrophoresis.

Al+++ gl KNO3 35°C 0.10M U M 1980KHb (21491) 278
B(AlL(tripolyphosphate))=7.97

****

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
Al+++	gl	KCl	25°C	0.20M	C		K1=8.15	B2=15.77	1995FKa (21804)	279
							B3=21.5			
							B(AlH-1L2)=10.40			
							B(AlH-2L2)=1.04			

****

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
Al+++	gl	KCl	25°C	0.10M	C		K1=11.74	B2=22.94	1995LMa (22487)	280
							B(ALHL)=17.60			

****

C2H7O3P H2L CAS 71778-99-9 (1978)
Ethylphosphonic acid; CH3.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=6.63	B2=12.1	1996AKa (22566)	281
							B(AlH-1L)=2.34			
							B(AlH-2L)=-3.93			
							B(AlH-1L2)=6.1			

****

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
Al+++	oth	non-aq	?	100%	U	M		1962BBa (23128)	282

K(4Al2A6L=Al8A24L4)=6.2
Method: freezing point. Medium: benzene. HA=isopropylalcohol
****
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
Al+++	gl	KNO3	25°C	0.10M	C		K1=19.12		2002GKc (23356)	283
							B(AlH-1L)=13.93			
							B(AlH-2L)=2.71			
							B(AlH3L2)=44.28			
Al+++	gl	KNO3	25°C	0.10M	C		K1=22.7	B2=31.10	1998LDa (23357)	284
							B(AlHL)=27.2			
							B(AlH2L)=29.1			
							B(Al2HL)=38.7			
							B(AlH2L2)=43.1			
							B(AlH-1L)=17.6			
Al+++	gl	KCl	25°C	0.10M	U		K1=15.29	B2=22.26	1967KLa (23358)	285
							K(Al+H-1L)=21.37			
							K(Al+2H-1L))=25.87			
							K(2Al+H-1L))=27.25			
							K(2Al+L)=19.33			

****
C2H9NO6P2 H4L IDPA CAS 32545-63-4 (1335)
Imino-N,N-bis(methylenephosphonic acid); HN(CH2PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KNO3	25°C	0.1M	C		B2=20.60		1985MMa (23451)	286
							K(AlL(OH)+H)=6.92			

****
C2H16N5O4Co HL (231)
Pentaammineoxalatocobalt(III); Co(NH3)5(HC2O4)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	NaClO4	28°C	0.30M	U		K1=1.74		1974NDa (23472)	287

****
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
Al+++	EMF	NaCl	25°C	0.0	C	TIH	K1=7.49	B2=12.62	1998RPb (24383)	288

Method: Pt/H2 electrode. Calculated from data for 0.10-1.0 m NaCl, 5-75 C.
DH(K1)=19 kJ mol-1, DS(K1)=208 J K-1 mol-1; DH(B2)=29, DS(B2)=340.

```
Al+++      sol none   35°C 0.00  C T      B2=11.3        1995FYa (24384) 289
Method: atomic absorption and ion chromatography.
At 80 C, B2=14.5
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C        K1=6.711  B2=11.53  1993PTa (24385) 290
                                          K3=2.58
                                          *K(AlL2)=-6.68
--------------------------------------------------------------------------------
Al+++      gl  NaCl   37°C 0.15M C        K1=6.264  B2=11.111 1982JCa (24386) 291
                                          B3=13.3
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 1.00M U T                    1974TGa (24387) 292
                                          K(Al+HL)=3.58
                                          K(Al+2HL)=5.99
                                          K(Al+3HL)=8.58
At 35 C: K(Al+HL)=4.04, K(Al+2HL)=6.32, K(Al+3HL)=8.98
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 30°C 0.20M U        K1=5.24   B2=9.40   1967AMa (24388) 293
--------------------------------------------------------------------------------
Al+++      gl  oth/un 35°C    ?  U                    1958DBb (24389) 294
                                          K3=4.06
                                          B3=15.84
********************************************************************************
C3H6NO2Cl              HL                      (8169)
3-Chloroalanine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M C        K1=4.05   B2= 6.05  1981TMe (24759) 295
Also data for the schiff based formed with pyridoxal.
********************************************************************************
C3H6N2O3               H2L                     (7445)
2-(Hydroxyimino)propanohydroxamic acid; CH3C(:NOH)CONHOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  NaCl   37°C 0.15M C TI                   2000GKb (24824) 296
                                          B(AlHL)=17.370
                                          B(AlH2L2)=34.461
                                          B(AlH3L3)=50.130
                                          B(AlH2L3)=43.968
B(AlHL3)=36.176, B3=26.940, B(Al3H-1L2)=27.322. At 25C, 0.1 M KNO3:
B(AlHL)=17.885, B(AlH2L2)=34.996, B3=26.471, B(AlH3L3)=51.036.
********************************************************************************
C3H6O2                 HL    Propionic acid   CAS 79-09-4  (35)
Propanoic acid; CH3.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                    1989MOa (24980) 297
```

```
                                        K(2Al+HL=Al2(OH)2L+3H)=-8.038
--------------------------------------------------------------------------------
Al+++      gl  NaNO3  25°C 1.00M U        K1=1.7         1975KIb (24981) 298
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 1.00M U T      K1=1.78   B2=3.4    1975TRa (24982) 299
Values also at 35 C, 45 C
********************************************************************************
C3H6O3                 HL                      CAS 81598-26-7  (2521)
3-Hydroxypropanoic acid; HO.CH2.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  oth/un   ?     ?  U                        1972PKa (25259) 300
                                        K(Al+3HL)=7.38
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                        1990MOa (25390) 301
                                        K(2Al+HL=Al2L(OH)+3H)=-6.86
                                        K(2Al+2HL=Al2H-4L2+6H)=-16.79
K(13Al+4HL=Al13L4(OH)32+36H)=-106.9
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C        K1=2.36   B2=4.42   1986MSb (25391) 302
                                        K3=1.37
                                        K(AlL2=AlH-1L2+H)=-3.45
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 1.00M U T      K1=4.26   B2=4.8    1975TRa (25392) 303
Values also at 35 C, 45 C
--------------------------------------------------------------------------------
Al+++      sp  oth/un   ?     ?  U                        1972PKa (25393) 304
                                        K(Al+HL)=4.46
                                        K(Al+2HL)=6.51
--------------------------------------------------------------------------------
Al+++      EMF NaNO3  20°C 0.20M U        K1=2.38   B2=4.56   1971HUb (25394) 305
                                        B3=6.66
--------------------------------------------------------------------------------
Al+++      sp  oth/un   ?     ?  U                        1970PKd (25395) 306
                                        B3=3.79
                                        K(Al+L+2OH=AlOH(H-1L))=8.49
                                        K(Al+L+3OH=Al(OH)2(H-1L))=24.6
--------------------------------------------------------------------------------
Al+++      sp  oth/un   ?     ?  U        K1=0.85   B2=2.92   1969PKc (25396) 307
                                        K(Al+2H-1L)=23.05
********************************************************************************
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
Al+++	gl	NaNO3	25°C	0.50M	C			1989DJa (26137)	308
							B(Al2H-2L2)=7.23		
							B(AlH-3L)=-7.70		
Al+++	gl	KNO3	35°C	0.10M	U	M		1980KHb (26138)	309
							B(AlL(tripolyphosphate))=7.51		

****

C3H7NO2 HL (6927)

N-Methylacetohydroxamic acid; CH3.CO.N(OH)CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=8.69 B2=16.21	2000FEc (26620)	310
							B3=22.41		

****

C3H7NO2 HL (7502)

Propanohydroxamic acid; C2H5CONHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=7.97 B2=15.59	2000FEc (26630)	311
							B(AlH-1L2)=10.14		
							B(AlH-2L2)=0.3		

****

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
Al+++	gl	NaClO4	25°C	0.10M	U	M	K1=6.43	1975RMa (26751)	312
							B(AlL(citrate))=14.90		
							B(AlL(NTA))=18.89		
							K(Al+L+HPO4)=15.66		

****

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
Al+++	gl	NaCl	37°C	0.15M	C			2002DCa (27114)	313
							B(Al2H-2L)=0.198		
Al+++	gl	KCl	25°C	0.20M	C		K1=5.66	1997KSa (27115)	314
							B(AlH-1L)=0.62		
							B(Al2H-1L)=3.75		
Al+++	oth	NaClO4	35°C	0.10M	C		K1=6.90 B2=12.20	1986SGd (27116)	315
							B3=16.04		

Method: electrophoresis

****

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
Al+++	gl	KCl	25°C	1.00M	C	M	K1=13.12		1985SMd (27350)	316
							K(AlL+H)=3.22			

ternary complexes with pyridoxal-5'-phosporic acid

****

C3H8NO5P 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
Al+++	gl	KCl	25°C	1.00M	C		K1=10.93		1989MSb (27361)	317
							K(AlL+H)=4.19			

****

C3H8NO5P H3L Glyphosate CAS 1071-83-6 (1617)
N-(Phosphonomethyl)glycine; H2O3P.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values			Reference	ExptNo
Al+++	gl	KNO3	25°C	0.1M	C		K1=13.70	B2=22.05		1985MMa (27401)	318
							B(AlHL)=16.18				
							B(AlHL2)=27.76				

****

C3H8NO6P H3L Phosphoserine CAS 17885-08-4 (1865)
Serine dihydrogenphosphate, O-Phosphoserine; NH2.CH(CH2.OPO3H2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values			Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=11.48			1998KLb (27463)	319
							B(AlHL)=14.88				
							B(AlH-1L)=5.44				
							B(AlH-2L)=-2.63				
Al+++	gl	KCl	25°C	0.10M	U		K1=8.50	B2=12.76		1997ZTa (27464)	320
Al+++	gl	KNO3	25°C	0.10M	C		K1=4.79	B2= 8.81		1981TMe (27465)	321
							B3=10.68				

Also data for the schiff based formed with pyridoxal.

****

C3H8N2O2 HL Ala-hydroxamic CAS 16707-85-0 (1582)
2-Amino-N-hydroxypropanamide, Alanine hydroxamic acid; CH3.CH(NH2).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		B2=16.7		1989FSa (27576)	322

B(AlHL)=14.35
B(Al2L2)=22.21
B(Al2H-1L2)=17.59
B(Al2H-2L2)=12.63
Also B(Al2H-3L2)=5.85; B(Al2H-4L2)=-2.44; B(AlH-1L2)=9.62; B(AlH-2L2)=-0.16.
****
C3H8N2O2 HL (6666)
beta-Alaninehydroxamic acid; NH2.CH2.CH2.CO.NHOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C B2=19.87 1995FKa (27606) 323
B(AlHL)=16.72
B(AlH2L2)=32.07
B(AlHL2)=27.04
B(AlH-1L2)=10.74
B(AlH-2L2)=0.04.
****
C3H8O10P2 H5L (6577)
2,3-Diphospho-D-glyceric acid; H2O3PO.CH2.CH(COOH)OPO3H2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C B2=12.46 1990SKc (27802) 324
B(AlHL)=13.12
B(AlH2L2)=24.42
B(AlHL2)=18.78
****
C3H9N3O2 HL CAS 471915-95-4 (8549)
2,3-Diamino-N-hydroxypropanamide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=11.7 B2=17.60 2002ECa (27982) 325
B(AlHL2)=24.2
****
C3H9O6P HL CAS 17181-54-3 (7537)
1,3-Dihydroxypropyl-2-phosphoric acid; HOCH2CH(OPO3H2)CH2OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaClO4 25°C 0.10M C K1=5.30 B2=10.38 2003CCa (28029) 326
B(Al2H-1L2)=11.72
B(Al3H-5L2)=-3.42
B(Al3H-6L2)=-10.03
B(Al3H-7L2)=-18.05
Additional method: 31P nmr. B(Al3H-1L3)=20.53. Fixed values:
B(AlHL)=8.5, B(AlH2L)=9.4, B(AlHL2)=14.0.
****
C3H9O6P H2L CAS 57-03-4 (2984)

2,3-Dihydroxypropylphosphoric acid, Glycerol 1-phosphate; HO.CH2.CH(OH).CH2.OPO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.10M	C		K1=5.87 B2=10.31 B(Al2H-1L2)=11.80 B(Al3H-5L2)=-2.98 B(Al3H-6L2)=-9.51 B(Al3H-7L2)=-17.30	2003CCa (28046)	327

Additional method: 31P nmr. B(Al3H-1L3)=20.63. Fixed values:
B(AlHL)=8.5, B(AlH2L)=9.4, B(AlHL2)=14.0.

****

C3H10NO3P H2L (1986)

1,1-Dimethyl-1-aminomethylphosphonic acid; H2N.C(CH3)2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	U		K1=11.42 B2=19.53 K(Al+HL)=5.59 K(Al+2HL)=9.61 K(Al+3HL)=13.07	1969DMd (28073)	328

****

C4H2O4 H2L Squaric acid CAS 2892-51-5 (439)

3,4-Dihydroxy-3-cyclobutene-1,2-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	ix	R4N.X	25°C	1.00M	U		K1=1.85 B2=2.74	1972CSb (28635)	329

Medium: NH4ClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	ix	NaClO4	25°C	0.30M	U		K1=2.83	1969TWa (28636)	330

****

C4H4O4 H2L Maleic acid CAS 110-16-7 (111)

cis-Butenedioic acid; HOOC.CH:CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.04M	M		K1=5.48 B2= 8.78	1993MYa (29046)	331

Medium: 0.01 M HClO4, 0.005 M Al(ClO4)3.

****

C4H5N3O2 HL 6-Aminouricil CAS 873-83-6 (6213)

4-Amino-2,6-dihydroxypyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	30°C	0.10M	U		K1=13.32 B2=25.27	1986JDa (29421)	332

****

C4H6O3 HL CAS 600-18-0 (5474)

2-Ketobutanoic acid; CH3.CH2.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C		K1=2.09	B2=3.65	1982KMc (29746)	333

****

C4H6O3 HL Acetoacetic aci CAS 541-50-4 (5475)
3-Ketobutanoic acid; CH3.CO.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C		K1=1.21	B2=1.84	1982KMc (29750)	334

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	37°C	0.15M	C		K1=3.753 B(AlHL)=7.154 B(Al2H-2L)=-1.103 B(Al3H-1L2=9.114 B(Al3H-3L2)=1.385 B(Al4H-6L3)=-4.44, B(Al8H-12L4)=-12.16	1998VBa (29928)	335
Al+++	gl	KCl	25°C	0.20M	C		K1=3.63 B(AlHL)=7.03 B(AlH-1L)=-0.53 B(AlH-2L)=-5.55	1997KSa (29929)	336
Al+++	gl	NaCl	37°C	0.15M	C		K1=4.17 B(AlHL)=7.18 B(AlH-2L)=-4.65 B(Al2H-3L)=-4.94	1990FDa (29930)	337
Al+++	gl	NaCl	37°C	0.15M	U		K1=3.91 B(Al2H-3L)=-5.23 B(Al3H-2L2)=5.34	1987VBe (29931)	338
Al+++	gl	NaClO4	25°C	0.50M	U		K1=3.2 B(AlHL)=6.60 B(AlH-1L)=4.2	1984CDa (29932)	339
Al+++	gl	NaCl	37°C	0.15M	C		B(AlH-1L)=-0.25 B(Al2H-1L)=2.88 B(AlH-2L)=-5.19	1982JCa (29933)	340
Al+++	gl	NaClO4	25°C	1.00M	U		K(Al+HL)=3.84 K(Al+2HL)=5.93 K(Al+3HL)=8.98	1974TGa (29934)	341

At 35 C: K(Al+HL)=3.78, K(Al+2HL)=6.40, K(Al+3HL)=9.52

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.60M	C		1990MOb	(30114)	342
							K(Al+H2L=AlL+2H)=-2.213		
							K(Al+2H2L=AlL2+4H)=-5.73		
							K(Al+3H2L=AlL3+6H)=-11.19		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	U		K1=1.93	1972NAb	(30210) 343
							B(AlL(OH))=12.34		

****

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
Al+++	gl	KCl	25°C	0.20M	C		K1=8.63	1997KSa	(30318) 344
							B(AlHL)=12.99		
							B(AlH-1L)=4.05		

****

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
Al+++	gl	NaCl	37°C	0.15M	C		K1=4.519	2001VBa	(30578) 345
							B(AlHL)=7.032		
							B(AlHL2)=10.981		
							B(AlH-1L)=1.268		
							B(Al2H-2L)=0.564		

B(Al2H-3L)=-3.054, B(Al2H-3L2)=1.779, B(Al2H-4L2)=-4.462,
B(Al2H-1L3)=12.789, B(Al3H-4L4)=10.132, B(Al4H-5L4)=10.537.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	23°C	0.10M	U			1994KGa	(30579) 346
							Keff=11.6		

Method: spectrophotometric using pyrocatechol violet. Tris buffer adjusted
to a pH=5.34 with HCl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	37°C	0.15M	C		K1=4.37 B2=8.17	1990FDa	(30580) 347
							B(AlH-1L2)=4.11		

```
Al+++      gl  NaNO3  25°C 0.50M M    M                  1989MAa (30581) 348
                                        B(-3,1,1)=-10.5
                                        K(2AlH-2L=Al2H-4L2)=-22.2
B(p,q,r): pH+qM+rH2L. K(UO2+Al+2H2L=UO2AlH-4L2+8H)=-8.06
-------------------------------------------------------------------------------
Al+++      gl  NaCl   37°C 0.15M U        K1=4.60   B2= 7.62  1987VBe (30582) 349
                                        B(AlHL)=6.87
                                        B(AlHL2)=11.31
                                        B(AlH-1L2)=4.31
                                        B(Al2H-2L2)=5.59
B(Al2H-3L2)=2.50
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.01M U                    1976MPb (30583) 350
                                        K(Al+H2L=AlH-1L+3H)=-5.39
                                        K(AlH-2L+H)=4.72
                                        K(AlH-3L+H)=7.60
-------------------------------------------------------------------------------
Al+++      EMF KNO3   20°C 0.20M U        K1=5.34   B2=9.32   1969PVc (30584) 351
-------------------------------------------------------------------------------
Al+++      sp  NaClO4 29°C  1.0M U        K1=3.32        1965MNa (30585) 352
*******************************************************************************
C4H6O5                H2L    Diglycolic acid  CAS 110-99-6  (243)
Di(carboxy)methyl ether, 2,2'-Oxydiethanoic acid; HOOC.CH2.O.CH2.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.10M U TIH    K1=3.43   B2=6.42   1979SDc (30851) 353
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M U        K1=3.16   B2=5.25   1972NAd (30852) 354
*******************************************************************************
C4H6O6                H2L    DL-Tartaric acd  CAS 133-37-9  (94)
DL-Tartaric acid,DL-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      gl  NaNO3  25°C 0.50M M    M                  1989MAa (31009) 355
                                        B(-4,1,1)=-7.8
                                        K(2AlH-2L=Al2H-4L2)=-18.5
B(p,q,r): pH+qM+rH2L. K(UO2+Al+2H2L=UO2AlH-4L2+8H)=>-12
*******************************************************************************
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
-------------------------------------------------------------------------------
Al+++      gl  NaCl   37°C 0.15M C        K1=3.788       2000DDb (31185) 356
                                        B(AlH-1L)=1.165
                                        B(Al2H-1L2)=7.976
                                        B(Al2H-2L2)=5.347
                                        B(Al2H-3L2)=1.009
```

B(Al2H-4L2)=-5.101

Al+++ sp oth/un 23°C 0.10M U 1994KGa (31186) 357
Keff=11.7
Method: spectrophotometric using pyrocatechol violet. Tris buffer adjusted to a pH=6.00 with HCl

---

Al+++ gl NaCl 25°C 0.60M C 1990MOd (31187) 358
B(1,-2,1)=-3.44
B(2,-5,2)=-6.30
B(2,-6,2)=-8.91
B(2,-7,2)=-13.12
B(2,-8,2)=-18.95. B(p,q,r): pAl+qH+rH2L=AlpHq(H2L)r

Al+++ gl KNO3 25°C 0.10M C B2=7.65 1984MMb (31188) 359
B(AlH-1L)=1.18
*K(AlH-1L)=-5.15
*K(AlL2)=-3.72
K(AlH-3L2+2H)=12.67

Al+++ gl NaClO4 25°C 0.10M U K1=5.62 B2=9.95 1972MRc (31189) 360
Meso Tartaric acid: K1=5.32, K2=4.45.

Al+++ oth oth/un 20°C 0.0 U K1=6.35 1967FRa (31190) 361
K(Al+HL)=3.43
K(AlOH+L=AlH-1L)=9.05
K(Al(OH)2+L=AlH-2L)=10.92
K(Al(OH)3+L=AlH-2LOH)=8.37
Method: optical rotation. K(Al(OH)4+L=Al(H-2L)(OH)2)=8.89, B(Al2L)=2, K(Al+AlH-1L)=3, K(Al+H-2L)=4,K(AlL+H2L)=0.66,K(AlH-1L+H2L)=1.12 plus others

---

Al+++ oth oth/un 20°C ? U 1967PTa (31191) 362
K(AlOH+L)=1.8
Method: refraction

Al+++ dis NaClO4 20°C 0.10M U B2=9.56 1963STc (31192) 363

****

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

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

---

Al+++ gl KCl 25°C 0.20M C K1=7.87 1997KSa (31811) 364
B(AlHL)=11.76
B(AlH-1L)=3.30
B(AlH-2L)=-2.32

Al+++ gl NaClO4 25°C 0.50M U 1984CDa (31812) 365
K(Al+HL)=2.16
K(Al(OH)+HL)=3.03

```
------------------------------------------------------------------------------
Al+++      gl  KNO3   35°C 0.10M U    M                  1980KHb (31813) 366
                                          B(AlHL(tripolyphosphate))=8.29
------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.10M U        K1=16.29  B2=30.69  1972SSe (31814) 367
                                          K3=11.50
******************************************************************************
C4H7NO4               H2L    IDA              CAS 142-73-4  (118)
Iminodiethanoic acid; HN(CH2.COOH)2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      sp  oth/un 25°C 0.10M U        K1=8.10        1997YSa (32195) 368
------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.10M U T      K1=8.62   B2=16.12  1981DSa (32196) 369
At 35 C: K1=8.42, B2=16.62; 45 C: 8.28, 15.49
------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M U        K1=8.10   B2=15.07  1971LNb (32197) 370
******************************************************************************
C4H7NO5               H2L                        (1234)
N-Hydroxyiminodiethanoic acid; HO.N(CH2.COOH)2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M C        K1=5.1         1987AKa (32426) 371
******************************************************************************
C4H8NO2Cl              HL                         (8170)
3-Chloro-2-aminobutanoic acid;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M C        K1=4.13   B2= 6.33  1981TMe (32468) 372
Also data for the schiff based formed with pyridoxal.
******************************************************************************
C4H8N2O3               HL    Asparagine       CAS 70-47-3  (17)
2-Aminobutanedioic acid 4-amide; H2N.CH(CH2.CO.NH2).COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.20M C        K1=5.50        1997KSa (32681) 373
                                          B(AlH-1L)=1.31
******************************************************************************
C4H8N2O3               HL    Gly-Gly          CAS 556-50-3  (54)
Glycyl-glycine; H2N.CH2.CO.NH.CH2.COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  KNO3   35°C 0.10M U    M                  1980KHb (33017) 374
                                          B(AlHL(tripolyphosphate))=4.18
******************************************************************************
```

C4H8N2O4 H2L (6369)
N(1)-Hydroxyasparagine, aspartyl-beta-hydroxamic acid; H2N.CH(CH2.CO.NHOH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		B2=19.26		1995FKa (33132)	375
							B(AlHL)=16.27			
							B(AlH2L2)=31.76			
							B(AlHL2)=26.80			
							B(AlH-1L2)=10.36			

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	NaNO3	25°C	1.00M	U		K1=1.6		1975KIb (33328)	376

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	diox/w	30°C	50%	U		K1=3.45		1956IFa (33403)	377

****

C4H9NO2S HL Methylcysteine CAS 1187-84-4 (84)
2-Amino-3-methylmercaptopropanoic acid; H2N.CH(CH2.S.CH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	dis	NaClO4	35°C	0.10M	U	M	K1=7.68		1995TKa (34094)	378

Method: Paper electrophoresis; Ternary complexes with NTA.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	NaCl	37°C	0.15M	C				2002DCa (34287)	379
							B(Al2H-2L)=-0.177			
Al+++	gl	KCl	25°C	0.20M	C		K1=5.51		1997KSa (34288)	380
							B(AlH-1L)=0.94			
Al+++	oth	NaClO4	35°C	0.10M	C		K1=7.94	B2=13.04	1986SGd (34289)	381
							B3=18.94			

Method: electrophoresis

Al+++	gl	KNO3	35°C	0.10M	U	M			1980KHb (34290)	382
							B(AlL(tripolyphosphate))=7.55			

****

C4H10O L Ether CAS 60-29-7 (3573)
Diethyl ether (ethyl ether, ethoxyethane); C2H5.O.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	oth	oth/un	20°C	0.07M	U		K1=1.34	1965PBc (34651)	383

Method: mass spectrograph. Medium: AlI3

****

C4H11N3O2 HL CAS 471915-94-3 (8550)
2,4-Diamino-N-hydroxybutanamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		B2=19.81 B(AlHL)=17.3 B(AlHL2)=27.2 B(AlH2L2)=34.0	2002ECa (35175)	384

****

C5H2O2F6 HL HFA CAS 1522-22-1 (195)
1,1,1,5,5,5-Hexafluoropentane-2,4-dione; F3C.CO.CH2.CO.CF3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	nmr	non-aq	25°C	100%	U	H		1964PCa (35920)	385

Method:NMR, medium:CHCl3. DG(trans-AlL3=cis-AlL3)=3.8 kJ mol-1,DH=1.0,DS=-8

****

C5H5NO2 HL CAS 13161-30-3 (5582)
1-Hydroxypyridin-2(1H)-one, 2-Hydroxypyridine 1-oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		B2=12.5	2000FEc (36751)	386
Al+++	gl	KCl	25°C	0.10M	U		K1=8.16 B2=15.54 K3=6.05	1993LMc (36752)	387

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.60M	U	T	K1=8.59 B2=16.34 B3=23.11 B(AlH-1L3)=13.85	1999DBa (36779)	388

At 37 C, K1=8.19, B2=16.03, B3=21.77, B(AlH-1L3)=13.0

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	kin	NaClO4	34°C	0.10M	C		K(Al+H2L=AlL+2H)=-1.85	1979BMb (36780)	389

Method: stopped-flow.

****

C5H5NO3 H2L CAS 99110-85-7 (2195)
1,4-Dihydroxy-2-pyridinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C		B2=21.20 B3=25.16 B(AlHL)=16.5 B(AlHL2)=27.22 B(AlH2L2)=32.64		1992CMc (36841)	390

****

C5H6O5 H2L CAS 642-93-3 (5476)
3-Methyl-2-oxobutanedioic acid HOOC.CO.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C		K1=6.16	B2=10.80	1982KMc (37479)	391

****

C5H8O2 HL Acetylacetone CAS 123-54-6 (164)
Pentane-2,4-dione; CH3.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	dis	NaClO4	25°C	0.10M	C		K1=8.7		1986SNa (37910)	392

Method: rate of distribution of volatile ligand between aqueous phase and inert gas phase. K(H+L)=9.17 assumed.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	oth	NaClO4	25°C	0.10M	C	I T	K1=8.2 B3=21.4	B2=15.7	1982SLc (37911)	393

IUPAC evaluation. I=0 corr.: K1=8.6, B2=16.5, B3=22.3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	oth/un	30°C	0.0	U		K1=8.6 K3=5.8	B2=16.5	1955IFa (37912)	394

****

C5H9NO2 HL Proline CAS 147-85-3 (44)
Pyrrolidine-2-carboxylic acid; C4H8N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KNO3	35°C	0.10M	U	M	B(AlL(tripolyphosphate))=8.63		1980KHb (38601)	395

****

C5H9NO3 HL Hydroxyproline CAS 51-35-4 (416)
4-Hydroxy-2-pyrrolidinecarboxylic acid; C4H7N(OH)(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KNO3	35°C	0.10M	U	M	B(AlL(tripolyphosphate))=7.83		1980KHb (38719)	396

****

C5H9NO4 H2L Glutamic acid CAS 56-86-0 (22)
2-Aminopentanedioic acid; H2N.CH(CH2.CH2.COOH)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	37°C	0.15M	C		B(AlH2L)=15.015 B(Al2H-1L)=6.680 B(AlHL2)=18.850 B(AlH2L2)=23.425 B(Al3H-4L2)=3.810, B(Al3H-4L3)=11.220.	2003DBa (39059)	397
Al+++	gl	KCl	25°C	0.20M	C		K1=7.29 B(AlHL)=10.88 B(AlH-1L)=2.55 B(Al2L)=9.46	1997KSa (39060)	398
Al+++	gl	NaClO4	25°C	0.50M	U		K(Al+HL)=2.30 K(Al(OH)+HL)=3.50	1984CDa (39061)	399
Al+++	gl	KNO3	35°C	0.10M	U	M	B(AlHL(tripolyphosphate))=7.97	1980KHb (39062)	400
Al+++	gl	NaClO4	25°C	0.10M	U		K1=15.12 B2=29.40 K3=9.20	1972SSe (39063)	401

****

C5H9NO4 H2L MIDA CAS 4408-64-4 (190)
N-Methyliminodiethanoic acid; CH3.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	C		K1=7.55	1984NAa (39238)	402

****

C5H10NO7P 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
Al+++	gl	KCl	25°C	0.10M	U		K1=14.7 K(Al+HL)=7.3	1980VRa (39666)	403

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=5.61 B(AlH-1L)=1.33	1997KSa (39811)	404

****

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
Al+++	gl	KCl	25°C	0.20M	C		B2=19.89 B(AlHL)=16.65 B(AlH2L2)=32.79 B(AlHL2)=27.62 B(AlH-1L2)=9.9 B(AlH-2L2)=1.10	1995FKa (40077)	405

****

C5H10O4 HL (7178)
2,5-Dihydroxypentanoic acid; HOCH2CH2CH2CHOHCOOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.10M	C		K1=2.04 *K(AlL)=-3.14 *K(AlH-1L)=-2.25	1994BHa (40324)	406

****

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
Al+++	gl	KNO3	35°C	0.10M	U	M	B(AlL(tripolyphosphate))=7.97	1980KHb (40687)	407

****

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
Al+++	oth	oth/un	25°C	0.10M	C		K1=7.00 B2=11.50	1998TEb (41077)	408

Method: electrophoresis. Medium: 0.1 M HClO4.

****

C5H11NO2S H2L Penicillamine CAS 52-66-4 (350)
DL-2-Amino-3-mercapto-3-methylbutanoic acid; (CH3)2C(SH)CH(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	oth	NaClO4	35°C	0.10M	C		K1=11.50 B2=15.05	1996TKb (41252)	409

Method: paper electrophoresis.

****

C5H11O8P H2L Ribose-5-phosph CAS 4300-28-1 (2756)
Ribose-5-phosphoric acid, Ribofuranoside 5 Phosphoric acid;

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

```
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.20M C        K1=5.63        1996AKa (41420) 410
                                          B(AlH-1L)=1.69
                                          B(AlH-2L)=-4.83
********************************************************************************
C6H3N3O7               HL    Picric acid      CAS 88-89-1  (593)
2,4,6-Trinitrophenol; HO.C6H2(NO2)3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  oth/un 21°C 0.40M U        K1=1.05        1955BKa (42091) 411
                                          B3=3.12
********************************************************************************
C6H4N2O5               HL                    CAS 50-28-5  (505)
2,4-Dinitrophenol; HO.C6H3(NO2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  oth/un 21°C 0.40M U        K1=0.89        1955BKa (42223) 412
Medium:0.2-0.7(some EtOH)
********************************************************************************
C6H4N2O6              H2L                    CAS 7659-29-2  (2694)
1,2-Dihydroxy-3,5-dinitrobenzene; (HO)2.C6H2(NO2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C        B2=21.80       2004GAa (42263) 413
                                          B3=31.68
********************************************************************************
C6H5NCl2                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
--------------------------------------------------------------------------------
Al+++      sp  diox/w 25°C 100%  U                        1976BSa (42347) 414
                                          K(AlCl3+L)=2.14
********************************************************************************
C6H5NCl2                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
--------------------------------------------------------------------------------
Al+++      sp  diox/w 25°C 100%  U                        1976BSa (42352) 415
                                          K(AlCl3+L)=2.83
********************************************************************************
C6H5NO2                 HL    Picolinic acid   CAS 98-98-6  (391)
2-Pyridine-carboxylic acid; C5H4N.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Al+++      nmr NaCl   25°C  1.5M C        K1=4.11   B2= 7.90  2000LKb (42494) 416
Method: 27Al nmr.
-------------------------------------------------------------------------------
Al+++      gl  NaCl   37°C 0.15M C        K1=4.35   B2=8.48   1990FDa (42495) 417
                                         B(AlH-1L2)=4.15
                                         B(AlH-2L)=-3.19
-------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.15M U        K1=4.487  B2=8.419  1988JJa (42496) 418
                                         B(Al(OH)L2)=17.589
                                         B(Al(OH)2L)=21.73
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M C        K1=4.62   B2=8.60   1986MNb (42497) 419
                                         B3=12.3
-------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.15M U        K1=4.497  B2= 8.27  1985JJa (42498) 420
                                         B(AlH-1L2)=17.668
                                         B(Al2H-3L2)=39.27
*******************************************************************************
C6H5NO3               H2L                     CAS 609-71-2  (5910)
2-Hydroxypyridine-3-carboxylic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C        K1=12.48       1999MTb (42722) 421
                                         B(AlHL)=18.02
                                         B(AlH2L2)=34.73
                                         B(AlH3L3)=49.92
                                         B(AlH2L3)=43.0
Confirmed by H-nmr. By spectrophotometry: B(AlHL)=17.96
*******************************************************************************
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
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C        K1=11.89  B2=21.13  1999MTb (42747) 422
                                         B(AlHL)=16.91
                                         B(AlH2L2)=32.62
                                         B(AlHL2)=27.2
                                         B(AlH3L3)=46.91
B(AlH2L3)=41.2, B(AlHL3)=34.7, B3=27.04. H-nmr also used.
By spectrophotometry: B(AlHL)=16.89
*******************************************************************************
C6H5NO3               H2L                     CAS 10128-71-9  (8910)
3-Hydroxypyridine-4-carboxylic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C        K1=10.84  B2=19.50  2002DYa (42758) 423
                                         B3=26.09
```

B(AlHL)=15.97
B(AlH2L2)=30.78
B(AlHL2)=25.47
B(AlH3L3)=44.05, B(AlH2L3)=38.69, B(AlHL3)=32.67.
****
C6H5NO3 H2L CAS 609-70-1 (8911)
4-Hydroxypyridine-3-carboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaCl 25°C 0.60M C B2=20.5 2002DYa (42775) 424
B3=25.76
B(AlHL)=18.19
B(AlH2L2)=35.15
B(AlHL2)=28.7
B(AlH3L3)=50.76, B(AlH2L3)=42.92, B(AlHL3)=34.77.
****
C6H5NO4 H2L 3-Nitrocatechol CAS 6665-98-1 (2685)
1,2-Dihydroxy-3-nitrobenzene; O2N.C6H3(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.10M M K1=14.17 B2=26.30 1986HAb (42855) 425
B3=35.81
****
C6H5NO4 H2L 4-Nitrocatechol CAS 3316-09-4 (890)
1,2-Dihydroxy-4-nitrobenzene; O2N.C6H3(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.10M C K1=13.89 B2=26.33 2004GAa (42911) 426
B3=37.08

Al+++ gl KCl 25°C 0.10M C K1=13.75 B2=25.44 1997DSa (42912) 427
B3=34.38
B(AlH-1L2)=17.93

Al+++ gl KCl 25°C 0.10M M K1=13.74 B2=25.39 1984HAd (42913) 428
B3=34.31
****
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
---
Al+++ sp diox/w 25°C 100% U 1976BSa (42977) 429
K(AlCl3+L)=1.67
****
C6H6NCl L o-Chloroaniline CAS 95-51-2 (3088)
2-Chloroaniline (1-amino-2-chlorobenzene); Cl.C6H4.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sol NaNO3 55°C 0.10M C T K1=<-2.37 1998YFa (43199) 430
At 80 C, K1<-2.50.
****
C6H6NO6P H2L CAS 330-13-2 (5865)
4-Nitrophenylphosphoric acid; NO2.C6H4.O.PO.(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=4.80 1996AKa (43246) 431
B(AlH-1L)=1.19
B(AlH-2L)=-5.5
****
C6H6N2O2 HL (8281)
3-Hydroxy-2-amidocarboxypyridine, Hydroxypicolinamide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KNO3 25°C 0.10M C K1=7.54 B2=13.79 1990ARa (43373) 432
****
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
---
Al+++ sp diox/w 25°C 100% U 1976BSa (43387) 433
K(AlCl3+L)=2.35
****
C6H6N2O2 L p-Nitroaniline CAS 100-01-6 (465)
4-Nitroaminobenzene; H2N.C6H4.NO2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp diox/w 25°C 100% U 1976BSa (43404) 434
K(AlCl3+L)=1.52
****
C6H6N2O3 H2L CAS 2504-83-8 (1141)
Imidazolylpyruvic acid; C3H3N2.CH2.CO.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.10M U K1=9.0 B2=16.10 1975SDa (43451) 435
****
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
---

```
Al+++      gl  KCl    25°C 0.20M C    M   K1=16.20  B2=29.26  1993KAa (43715) 436
                                           B3=37.95
                                           B(Al2H-2L2)=24.05
B(AlLA)=26.92, B(AlLA2)=35.2, B(AlL2A)=37.12. H2A=salicylic acid
-------------------------------------------------------------------------------
Al+++      sp  KCl    25°C 0.10M C        K1=16.22       1989SMa (43716) 437
-------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C        K1=16.89  B2=30.55  1985KPa (43717) 438
                                           K3=8.98
                                           *K(AlL)=-6.07
                                           *K(AlL2)=-8.10
-------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M C                          1984MMb (43718) 439
                                           K(Al+H2L=AlL+2H)=-6.08
                                           K(AlL+H2L=AlL2+2H)=-9.18
                                           K(AlL2+H2L=AlL3+2H)=-13.52
                                           K(AlL2+H)=6.03
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M U                          1983OSa (43719) 440
                                           B(-2,1,1)=-6.337
                                           B(-4,1,2)=-15.44
                                           B(-6,1,3)=-28.62
                                           B(-5,1,2)=-23.45
B(-9,3,3)=-29.91.   B(p,q,r):pH+qAl+r(H2L)
-------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.20M U        K1=15.31  B2=27.67  1982HOb (43720) 441
                                           K3=7.74
-------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.20M U        K1=16.27  B2=29.75  1970GOa (43721) 442
                                           K3=9.00
-------------------------------------------------------------------------------
Al+++      gl  KNO3   20°C 0.10M U        K1=16.9   B2=30.50  1969HBa (43722) 443
                                           K3=8.9
-------------------------------------------------------------------------------
Al+++      gl  KNO3     ?  0.20M U        K1=16.56  B2=32.20  1964DMa (43723) 444
                                           K3=13.65
*******************************************************************************
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
-------------------------------------------------------------------------------
Al+++      gl  KCl    22°C 0.20M U        K1=24.50  B2=44.55  1970GOb (43946) 445
                                           K3=13.40
-------------------------------------------------------------------------------
Al+++      gl  KNO3     ?  0.20M U                          1967DMa (43947) 446
                                           K(Al+HL)=14.3
                                           K(AlHL+HL)=13.5
                                           K(Al(HL)2+HL)=11.9
*******************************************************************************
```

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
Al+++	gl	NaCl	25°C	0.15M	C		K1=5.66	B2=10.42	1989LCa (44031)	447
							K3=4.03			

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	nmr	NaCl	25°C	1.50M	C	T H			2002YPa (44073)	448

Method: 27Al and 17O nmr measurements at 0-65 C.
DH(Al+HL=AlL+H)=22 kJ mol-1; DH(AlL+HL=AlL2+H)=28 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	NaCl	25°C	0.15M	C		K1=8.44	B2=15.54	1991JSb (44074)	449
							B3=22.16			
Al+++	gl	NaCl	25°C	0.60M	C				1988HOa (44075)	450
							B(-1,1,1)=-0.130			
							B(-2,1,2)=-0.956			
							B(-3,1,3)=-2.669			
							B(-4,2,2)=-7.203			

B(p,q,r): pH+qAl+r(HL)=HpAlq(HL)r

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KNO3	25°C	0.10M	U		K1=7.7	B2=15.25	1969CBb (44076)	451
							K3=6.65			

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	NaCl	25°C	0.60M	C				1988HOa (44194)	452
							B(-1,1,1)=-0.371			
							B(-2,1,2)=-1.499			
							B(-3,1,3)=-3.564			
							B(-4,2,2)=-7.656			

B(p,q,r): pH+qAl+r(HL)=HpAlq(HL)r

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	KCl	25°C	0.10M	C		K1=7.66		1987PEa (44195)	453
Al+++	EMF	KCl	21°C	0.10M	U		K1=7.7	B2=14.2	1959OKb (44196)	454
							B3=19.5			

Method: H electrode

****
C6H6O5S H3L CAS 7134-09-0 (3687)
3,4-Dihydroxybenzenesulfonic acid; (HO)2.C6H3.SO3H

```
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  KNO3   20°C 0.10M U        K1=16.6   B2=29.90  1969HBb (44280) 455
                                         K3=9.3
******************************************************************************
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
------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.20M C    M   K1=15.75  B2=29.10  2002FCa (44397) 456
                                         B3=38.97
                                         B(AlAL)=22.48
                                         B(AlA2L)=34.27
A is acetohydroxamic acid.
------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M C                      1988YYa (44398) 457
                                         K(Al+H2L=AlL+2H)=-3.11
                                         K(AlL+H2L=AlL2+2H)=-6.26
                                         K(AlL2+H2L=AlL3+2H)=-9.9
------------------------------------------------------------------------------
Al+++      gl  KCl    30°C 0.10M U TIH    K1=15.48  B2=30.09  1980BDe (44399) 458
                                         K3=12.72
Data for I=0.20 and 0.30 M. Data at 40 C. DH and DS values.
At I=0, K1=16.00, K2=15.18, K3=13.00.
------------------------------------------------------------------------------
Al+++      kin NaClO4 34°C 0.10M C                      1979BMb (44400) 459
                                         K(Al+H2L=AlL+2H)=-2.62
Method: stopped-flow.
------------------------------------------------------------------------------
Al+++      gl  KNO3   20°C 0.10M U        K1=16.7   B2=30.30  1969HBa (44401) 460
                                         K3=9.7
------------------------------------------------------------------------------
Al+++      gl  NaNO3  25°C 0.20M U        K1=16.65  B2=30.25  1968ASa (44402) 461
------------------------------------------------------------------------------
Al+++      con KNO3     ?  0.10M U        K1=16.81       1965DMa (44403) 462
By glass electrode: K1=16.79, K2=16.58, K3=14.34
------------------------------------------------------------------------------
Al+++      gl  oth/un 25°C  0.0  U        K1=19.02  B2=31.10  1957NAd (44404) 463
                                         K3=2.4
******************************************************************************
C6H7N                   L    Aniline          CAS 62-53-3  (583)
Aminobenzene, aniline; C6H5.NH2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      sol NaNO3  80°C 0.10M C        K1=<-0.93      1998YFa (44867) 464
******************************************************************************
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
Al+++	gl	KCl	25°C	0.10M	C		K1=9.41 B2=17.79 B3=25.10	1992CMc (45023)	465

****

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
Al+++	gl	NaCl	25°C	0.15M	C	I	K1=11.87 B2=22.54 B3=32.05	1989CNa (45047)	466

Data also at I=0.6 M(NaCl): K1=11.43, B2=21.73, B3=30.41

****

C6H7O4P H2L CAS 701-64-4 (5866)
Phenyl phosphoric acid; C6H5O.PO(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=5.29 B(AlH-1L)=1.51 B(AlH-2L)=-4.5	1996AKa (45230)	467

****

C6H8O6 H3L Tricarballylic CAS 99-14-9 (1620)
1,2,3-Propanetricarboxylic acid; HOOC.CH2.CH(COOH).CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	37°C	0.15M	C		K1=5.44 B(AlHL)=8.85 B(AlH-1L)=1.88	1982JAc (45561)	468

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.60M	C		B(-1,1,1)=-2.59 B(-6,3,1)=-18.38 B(-9,3,4)=-24.19	1992ONa (45624)	469

B(p,q,r); pH+qAl+rHL=Hp(Al)q(HL)r
Note: L-ascorbic acid is here defined as HL

****

C6H8O7 H3L Isocitric acid CAS 1637-73-6 (2527)
2-Hydroxy-3-carboxypentanedioic acid; HOOC.CH(OH).CH(COOH).CH2.COOH

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

---

Al+++ gl KCl 25°C 0.10M C K1=6.905 1995PTa (45731) 470
B(AlHL)=9.55
B(AlH-1L)=3.06
B(Al2H-3L2)=4.08
An alternative model gave K1=6.96, B(AlHL)=9.37, B(AlH-1L)=2.92,
B(Al3H-4L3)=10.36.

****

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

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

---

Al+++ gl KCl 25°C 0.20M C K1=7.85 B2=12.73 2001LBa (46012) 471
B(AlHL)=10.18
B(AlH-1L)=4.27
B(AlH-2L)=-1.77
B(AlH-1L2)=7.81
B(AlH-2L2)=0.4, B(Al3H-4L3)=16.34.

Al+++ cal oth/un 25°C 0.04M C H 1997WDa (46013) 472
DH(Al+L=Al(OH)L+H)=41.6 kJ mol-1; DH(Al(OH)L+3OH=Al(OH)4+L)=-29.2 kJ mol-1
DH(Al+4OH=Al(OH)4)=-43.4 kJ mol-1.

Al+++ sp oth/un 23°C 0.10M U 1994KGa (46014) 473
Keff=9.4
Method: spectrophotometric using pyrocatechol violet. Tris buffer adjusted
to a pH=5.34 with HCl

Al+++ gl NaCl 37°C 0.15M C K1=8.34 B2=13.56 1990FDa (46015) 474
B(AlHL)=10.78
B(AlH-1L)=5.30
B(AlH-1L2)=7.99
B(AlH-2L)=-0.59

Al+++ gl NaNO3 25°C 0.50M M M 1989MAa (46016) 475
K(Al+H3L=AlH-1L+4H)=-6.6
K(2AlH-1L=Al2H-2L2)=-14.8
K(UO2+Al+2H4L=AlUO2H-2L2+8H)=-8.21

Al+++ gl NaCl 37°C 0.15M C K1=8.246 B2=13.068 1989VBa (46017) 476
B(AlHL)=10.502
B(AlH-2L)=6.777
B(AlH-2L2)-0.209
B(Al2H-2L2)=12.694

Al+++ gl NaCl 25°C 0.60M C 1988OHb (46018) 477
B(-4,1,1)=-8.48
B(-5,1,1)=-14.71
B(-16,3,3)=-47.11

B(p,q,r)=pH+qAl+rH3L=HqAlq(H3L)r

Al+++ gl NaCl 37°C 0.15M U K1=8.34 B2=13.69 1987FDb (46019) 478
B(AlHL)=10.79
B(AlH-1L)=5.29
B(AlH-2L)=-0.53
B(AlH-1L2)=8.21

Al+++ gl NaCl 37°C 0.15M U K1=8.25 B2=13.07 1987VBe (46020) 479
B(AlHL)=10.50
B(AlH-2L2)=-0.21
B(Al2H-2L2)=12.69
B(Al3H-4L3)=15.08
B(AlH-1L2)=6.78

Al+++ gl KCl 25°C 0.10M C K1=8.10 B2=12.90 1986GPc (46021) 480
B(AlHL)=10.81
K(AlL2=AlH-1L2+H)=-6.10
K(Al+L+HL)=11.14
B(AlHL2)=16.84
K(AlH-1L2=AlH-2L2+H)=-7.17

Al+++ NaCl 25°C 0.15M U K1=8.0 B2=13.00 1986MAa (46022) 481
K(Al+HL)=4.7
K(AlHL=AlL+H)=-2.5
K(AlL=ALH-1L+H)=-3.4
25-37 C. From a survey of literature data

Al+++ kin NaNO3 205°C var U K1=10.72 1984LKa (46023) 482
K(Al+HL)=6.56
K(Al+H2L)=2.91

Al+++ gl KNO3 25°C 0.10M C K1=7.98 1984MMb (46024) 483
K(AlL+H)=2.94
K(AlL=AlH-1L+H)=-3.31

Al+++ gl NaCl 25°C 0.60M C 1983OSd (46025) 484
B(-2,1,1)=-2.68
B(-3,1,1)=-4.925
B(-6,1,2)=-12.53
B(-13,3,3)=-21.77
B(p,q,r): pH + qAl + rH3L = AlqHp(H3L)r

Al+++ gl NaCl 25°C 0.60M C 1983OSe (46026) 485
B(-2,1,1)=-2.68
B(-3,1,1)=-4.925
B(-6,1,2)=-12.53
B(-13,3,3)=-21.77
B(p,q,r): pH+qAl+r(H3L)=HpAlq(H3L)r

```
Al+++      gl  NaCl   37°C 0.15M C        K1=7.87        1982JAc (46027) 486
                                          B(AlHL)=10.12
                                          B(AlH-1L)=4.64
                                          B(AlH-1L2)=8.8
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.12M C                       1981RMb (46028) 487
                                          K(Al+H-1L)=18.0
                                          K(AlL(OH)2+2H)=18.4
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.10M U    M   K1=8.65        1975RMa (46029) 488
                                          B(AlL(Cys))=14.90
                                          K(Al+L+HPO4)=19.29
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 33°C 0.25M U                       1961PPa (46030) 489
                                          K(Al+H3L=AlL+3H)=-4.7
                                          K(AlH-1L+H)=3.5
                                          K(Al(OH)H-1L+H=AlH-1L)=6.8
********************************************************************************
C6H9NO6               H3L                    CAS 41035-84-1  (4367)
N-Carboxymethyl-L-aspartic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.20M C        K1=2.24        1997KSa (46374) 490
                                          B(AlHL)=6.15
                                          B(AlH-1L)=-1.91
********************************************************************************
C6H9NO6               H3L    NTA             CAS 139-13-9  (191)
Nitrilotriethanoic acid; N(CH2.COOH)3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C        K1=11.097      1990OHb (46686) 491
                                          B(AlH-1L)=5.67
                                          B(AlH-2L)=-2.52
                                          B(Al2H-2L2)=13.16
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M C        K1=10.80       1984NAa (46687) 492
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.10M U T      K1=10.53  B2=19.08  1981DSa (46688) 493
At 35 C: K1=10.30, B2=18.57; 45 C: 10.18, 18.32
--------------------------------------------------------------------------------
Al+++      gl  KNO3   35°C 0.10M U        K1=11.61       1980KHb (46689) 494
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.10M U    M   K1=12.72       1975RMa (46690) 495
                                          B(AlL(Cys))=18.89
                                          K(Al+L+HPO4)=23.89
--------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.20M U        K1=11.37       1967BDb (46691) 496
By glass electrode: K(AlL+H)=1.90, K(AlLOH+H)=5.09, K(AlL(OH)2+H)=8.28
```

```
--------------------------------------------------------------------------------
Al+++      dis NaClO4 20°C 0.10M U      T K1=9.5         1963STc (46692) 497
--------------------------------------------------------------------------------
Al+++      gl  KCl    20°C 0.10M U        K1=>10         1948SBa (46693) 498
                                         K(AlLOH+H)=5.8
                                         K(AlL(OH)2+H)=8.6
********************************************************************************
C6H9N3O2               HL    Histidine        CAS 71-00-1  (1)
2-Amino-3-(4'-imidazolyl)propanoic acid; H2N.CH(CH2.C3H3N2)COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  NaCl   37°C 0.15M C                        2002DCa (47529) 499
                                         B(Al2H-2L)=1.163
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M U                        1984CDa (47530) 500
                                         K(Al(OH)+HL)=3.62
                                         K(Al(OH)+L)=8.45
********************************************************************************
C6H10O4S2              H2L                    CAS 7244-02-2  (438)
1,2-Bis(carboxymethylthio)ethane; HOOC.CH2.S.CH2.CH2.S.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M C        K1=2.05         1985NAb (48234) 501
                                         B(AlHL)=12.46
********************************************************************************
C6H10O8                H2L    Saccharic acid   CAS 87-73-0  (1191)
D-2,3,4,5-Tetrahydroxy-1,6-hexanedioic acid, Glucaric acid; HOOC.(CHOH)4.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M C                        1984MMb (48467) 502
                                         B(AlH-1L)=1.57
                                         *K(AlH-1L)=-3.76
********************************************************************************
C6H11NO5               H2L    HIMDA            CAS 93-62-9  (192)
N-(2-Hydroxyethyl)iminodiethanoic acid; HO.CH2.CH2.N(CH2.COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M C        K1=7.49         1984NAa (48687) 503
--------------------------------------------------------------------------------
Al+++      gl  KNO3   35°C 0.10M U        K1=9.33         1980KHb (48688) 504
********************************************************************************
C6H11NO5               H2L                      (1233)
N-Hydroxyimino-2,2'-dipropanoic acid; HO.N(CH(CH3)COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

Al+++ gl KNO3 25°C 0.10M C K1=5.9 1987AKa (48839) 505
****
C6H12N2O4 H2L CAS 4726-83-4 (5911)
N,N-Dihydroxyhexanediamide; HN(OH).CO.(CH2)4.CO.NH(OH)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaNO3 25°C 0.10M C K1=14.20 1989EHa (49332) 506
****
C6H12O6 HL CAS 498-43-1 (5803)
3-Deoxy-D-ribohexanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaCl 25°C 0.10M C K1=1.97 1994BHa (49529) 507
*K(AlL)=-2.83
K(AlH-1L=AlH-3L+2H)=-9.17
****
C6H12O7 HL Gluconic acid CAS 526-95-4 (904)
D-Gluconic acid, 2,3,4,5,6-Pentahydroxyhexanoic acid; HO.CH2(CHOH)4.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaNO3 25°C 0.10M C 1995EOa (49695) 508
B(AlH-1L)=-0.84
B(AlH-3L)=-10.70

Al+++ gl NaCl 25°C 0.10M C K1=2.01 1994BHa (49696) 509
*K(AlL)=-2.89
K(AlH-1L=AlH-3L+2H)=-9.30

Al+++ gl KNO3 25°C 0.10M C K1=1.98 1984MMb (49697) 510
*K(AlL)=-2.87
K(AlH-1L=AlH-3L+2H)=-9.29
****
C6H13NO2 HL Leucine CAS 61-90-5 (47)
2-Amino-4-methylpentanoic acid; H2N.CH(CH2.CH(CH3)2)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ oth NaClO4 35°C 0.10M C K1=7.92 B2=14.01 1986SGd (50058) 511
B3=18.90
Method: electrophoresis
****
C6H13NO2 HL CAS 4312-93-0 (4386)
Hexanohydroxamic acid; CH3.CH2.CH2.CH2.CH2.CO.NH.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=8.32 B2=16.17 2000FEc (50226) 512

B(AlH-1L2)=11.26
****
C6H13NO4 HL Bicine CAS 150-25-4 (2124)
N,N-Bis(2-hydroxyethyl)glycine; (HO.CH2.CH2)2N.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KNO3 25°C 0.10M C 1984MMb (50340) 513
K(Al+HL)=3.38
K(AlHL=AlH-2L+3H)=-13.72
****
C6H13O9P H2L CAS 59-56-3 (3049)
alpha-D-Glucose-1-phosphoric acid; Glucopyranose-1-phosphoric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=5.60 B2=10.41 2001CRa (50620) 514
B(AlH2L)=ca.9.40
K(AlHL)=8.50
B(AlHL2)=14.04
B(Al2H-1L2)=11.08
B(Al2H-2L2)=5.73, B(Al2H-3L2)=0.84, B(Al2H-4L2)=-5.09, B(AlH-3L)=-11.80.
Additional methods: 13C, 27Al and 31P nmr.
****
C6H14N4O2 HL Arginine CAS 74-79-3 (40)
2-Amino-5-guanidopentanoic acid; H2N.CH((CH2)3.NH.C(:NH)(NH2)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl oth/un 25°C ? U T K1=6.63 B2=12.86 1960PEd (51001) 515
7 C: K1=6.67, K2=6.38
****
C6H15N3O2 HL CAS 52760-35-7 (6670)
Lysine hydroxamic acid; H2N.(CH2)4.CH(NH2)CO.NHOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C B2=21.28 2002ECa (51424) 516
B(AlH2L)=24.21
B(AlH2L2)=36.94
B(AlHL2)=29.84
****
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
---
Al+++ gl KCl 25°C 0.10M C K1=11.8 B2=18.8 1993HGa (51447) 517
B(AlHL2)=25.3
*K(AlL2)=-8.1

*K(AlH-1L2)=-8.9
*K(AlH-2L2)=-9.1
*K(AlH-3L2)=-9.7

****

C6H15O15P3 H6L Ins(1,2,6)P3 CAS 28841-62-5 (6479)
D-myo-Inositol 1,2,6-trisphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	R4N.X	25°C	0.10M	C		K1=13.72 B(AlHL)=19.18 B(Al2L)=19.72 B(AlH-1L)=6.10		1995MBb (51533)	518

Medium: 0.10 M (n-Bu)4NBr.

****

C6H15O15P3 H6L CAS 88269-39-0 (8168)
D-myo-Inositol-1,4,5-triphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	R4N.X	25°C	0.10M	C		K1=13.37 B(AlHL)=18.98 B(AlH-1L)=5.84 B(AlH-2L)=-1.82		1995MBb (51543)	519

Medium: 0.10 M (n-Bu)4NBr.

****

C6H16O6P2 H4L CAS 4721-22-6 (3708)
Hexane-1,6-diphosphonic acid; H2O3P(CH2)6PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	U		K1=14.66		1967KLa (51791)	520

****

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
Al+++	gl	KNO3	30°C	0.10M	C		K1=7.53 K3=4.24	B2=13.24	1996MMa (52461)	521
Al+++	gl	NaClO4	25°C	0.10M	U		K1=8.81 K3=4.34	B2=15.39	1979LTc (52462)	522

****

C7H5NO4 H2L Quinolinic acid CAS 89-00-9 (567)
2,3-Pyridinedicarboxylic acid; C5H3N.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	nmr	NaCl	25°C	1.33M	U		K1=3.72	B2= 7.10	2001LKc (52620)	523

Method: 27Al NMR spectroscopy.

Al+++ gl NaClO4 25°C 0.50M C K1=4.50 B2=7.00 1986MNb (52621) 524

****

C7H5NO4 H2L CAS 499-80-9 (566)

2,4-Pyridinedicarboxylic acid; C5H3N.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	C		K1=4.35	B2=7.30	1986MNb	(52649) 525

****

C7H5NO4 H2L CAS 100-26-5 (2528)

2,5-Pyridinedicarboxylic acid, Isocinchomeronic acid; C5H3N.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	U		K1=3.95	B2=7.24	1970NAb	(52664) 526

****

C7H5NO4 H2L Dipicolinic aci CAS 449-83-2 (418)

2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	NaCl	25°C	1.00M	U		K1=11.37		1993NRa	(52751) 527
							K(Al+HL)=7.44			
Al+++	gl	NaClO4	25°C	0.50M	U		K1=4.87	B2=8.32	1968NAc	(52752) 528

By spectrophotometry: K1=4.85

****

C7H5NO5 H2L Nitrosalicylic CAS 85-38-1 (1416)

2-Hydroxy-3-nitrobenzoic acid; HO.C6H3(NO2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KNO3	30°C	0.10M	C		K1=10.22	B2=18.20	1996MMa	(52972) 529
							K3=6.87			
							K(AlL3+H)=6.56			

****

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
Al+++	gl	KCl	25°C	0.10M	C		K1=10.65	B2=19.81	2004GAa	(53035) 530
							B3=25.74			
Al+++	gl	KCl	30°C	0.10M	C		K1=10.91	B2=19.67	1996MMa	(53036) 531
							K3=5.36			
							K(AlL3+H)=6.24			

```
Al+++      gl  NaClO4 25°C 0.10M U        K1=11.11  B2=19.73  1979LTc (53037) 532
                                         K3=6.13
-------------------------------------------------------------------------------
Al+++      sp  oth/un 25°C 0.10M C                    1979PTb (53038) 533
                                         K(Al+HL=AlL+H)=1.11
-------------------------------------------------------------------------------
Al+++      sp  NaClO4 29°C 1.00M U    M               1976DDa (53039) 534
                                         K(Co(en)2(NH3)L+Al)=-0.45
*******************************************************************************
C7H5O3Br               HL                    CAS 85-55-4  (1194)
5-Bromosalicylic acid; Br.C6H3(OH).COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      sp  NaClO4 29°C 1.00M U    M               1976DDa (53307) 535
                                         K(Co(en)2(NH3)L+Al)=-0.72
*******************************************************************************
C7H6O2                 HL    Tropolone        CAS 533-75-5  (3129)
2-Hydroxycyclohepta-2,4,6-trien-1-one;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                    1990OHa (53665) 536
                                         K(Al+3HL=AlL3(s)+3H)=11.21
                                         Kso=-31.05
*******************************************************************************
C7H6O2                 HL    Benzoic Acid     CAS 65-85-0  (462)
Benzenecarboxylic acid; C6H5.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                    1991OHa (53821) 537
                                         B(-1,1,1)=-2.67
                                         B(-3,2,1)=-7.446
B(p,q,r); pH+qAl+rHL=HpAlq(HL)r
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M U                    1970NLa (53822) 538
                                         B(AlL(OH))=12.1
*******************************************************************************
C7H6O3                H2L    Salicylic acid   CAS 69-72-7  (14)
2-Hydroxybenzoic acid, Salicylic acid; HO.C6H4.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      sp  oth/un 23°C 0.10M U                    1994KGa (54139) 539
                                         Keff=4.8
Method: spectrophotometric using pyrocatechol violet. Tris buffer adjusted
to a pH=5.34 with HCl
-------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C      T             1983OSc (54140) 540
```

```
                                        B(-2,1,1)=-3.052
                                        B(-4,1,2)=-8.39
                                        B(-5,1,2)=-15.99
                                        B(-6,1,2)=-25.31
B(p,q,r); pH+qAl+r(H2L)=HpAlq(H2L)r
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.12M C      T K1=13.7   B2=26.70  1981RMb (54141) 541
                                        K3=10.73
                                        K(AlH-2L+2H)=10.40
                                        K(AlH-3L+H)=9.37
--------------------------------------------------------------------------------
Al+++      sp  NaClO4 29°C 1.00M U    M                  1976DDa (54142) 542
                                        K(Co(en)2(NH3)L+Al)=-0.46
--------------------------------------------------------------------------------
Al+++      kin NaClO4 25°C 0.10M U                       1975SVa (54143) 543
                                        K(Al+HL=AlL+H)=0.067
--------------------------------------------------------------------------------
Al+++      gl  KNO3   20°C 0.10M U        K1=12.9   B2=23.20  1969HBb (54144) 544
                                        K3=6.6
--------------------------------------------------------------------------------
Al+++      EMF NaNO3  18°C  1.0M U                       1961COb (54145) 545
                                        K(Al+3HL=AlHL2+H2L)=4.5
Method: quinhydrone electrode
--------------------------------------------------------------------------------
Al+++      sp  NaClO4 27°C 0.20M U  I                    1959DAa (54146) 546
                                        K(Al+HL=AlL+H)=-0.18
K=0.26(I=0),0.06(I=0.02),0.01(I=0.05),-0.13(I=0.10). Recalculated values
--------------------------------------------------------------------------------
Al+++      sp  oth/un 27°C  ->0  U        K1=14.11       1959DAa (54147) 547
********************************************************************************
C7H6O3                H2L                       CAS 99-06-9  (1370)
3-Hydroxybenzoic acid; HO.C6H4.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                       1991OHa (54375) 548
                                        B(-1,1,1)=-2.59
                                        B(-3,2,1)=-7.453
B(p,q,r); pH+qAl+rHL=HpAlq(HL)r
********************************************************************************
C7H6O4                H3L                       CAS 303-38-8  (1398)
2,3-Dihydroxybenzoic acid; C6H3(OH)2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C        K1=10.62  B2=19.20  2004GAa (54461) 549
                                        B(Al2H-3L2)=10.30
                                        B(AlH-1L2)=13.50
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.20M C      T K1=10.32  B2=18.26  1993KAa (54462) 550
```

B(AlH-1L2)=11.56
B(AlH-2L2)=1.74
B(Al2H-2L2)=13.62
B(Al2H-3L2)=8.87

****

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
Al+++	gl	KCl	25°C	0.20M	C	T	K1=8.71 B2=15.03	1993KAa (54514)	551
							B(Al2H-2L2)=9.1		
							B(AlH-1L2)=7.21		

****

C7H6O4 H3L CAS 409-79-9 (1115)
2,5-Dihydroxybenzoic acid; C6H3(OH)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C	T	K1=9.74 B2=17.17	1993KAa (54580)	552
							B(Al2H-2L2)=11.5		
							B(AlH-1L2)=9.97		
Al+++	gl	NaClO4	25°C	0.50M	C	T		1985CDa (54581)	553
							K(Al+HL)=10.4		
							K(Al+2HL)=18.15		
Al+++	sp	NaClO4	20°C	0.09M	U	TIH		1971SGa (54582)	554
							K(Al+H2L=AlHL+H)=-3.96		

K(Al+H2L=AlHL+H)(I=0.01)=-3.49, (I=0.20)=-4.47. DH=22.7 kJ mol-1, DS=173

****

C7H6O4 H3L g-Resorcylic ac CAS 303-07-1 (1624)
2,6-Dihydroxybenzoic acid; C6H3(OH)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C	T	K1=12.79 B2=23.67	1993KAa (54603)	555
							B(Al2H-2L2)=17.2		
							B(AlH-1L2)=16.46		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=16.47 B2=29.38	1993KAa (54657)	556
							B3=38.35		
							B(AlHL)=21.09		
							B(Al2H-2L2)=25.03		

```
Al+++      sp  none   25°C    0  U        K1=15.33       1990SMd (54658) 557
--------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M C        K1=16.1        1985CDa (54659) 558
                                          K(Al+HL)=7.8
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C        K1=16.87  B2=29.88  1985KPa (54660) 559
                                          K3=8.76
                                          *K(AlL)=-5.77
                                          *K(AlL2)=-8.39
                                          K(Al+H2L=AlH2L)=2.85
K(AlL+H)=4.66
--------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.20M U        K1=15.03  B2=27.64  1982HOb (54661) 560
                                          K3=9.91
********************************************************************************
C7H6O5                H4L                      CAS 610-02-6  (3725)
2,3,4-Trihydroxybenzoic acid; (HO)3.C6H2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.20M C        K1=9.10   B2=15.94  1993KAa (54719) 561
                                          B(AlH-1L2)=10.26
                                          B(AlH-2L2)=2.26
                                          B(AlH-2L3)=6.79
                                          B(Al2H-2L2)=11.09
B(Al2H-3L2)=6.49, B(Al2H-4L2)=-0.69. Ligand as H2L
********************************************************************************
C7H6O5                H4L    Gallic acid      CAS 149-91-7  (446)
3,4,5-Trihydroxybenzoic acid; C6H2(OH)3.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                         1982OSa (54748) 562
                                          B(-5,3,1)=-12.52
                                          B(-9,4,3)=-20.25
B(p,q,r); pH+qAl+r(H3L)=HpAlq(H3L)r.  K(Al+H3L+4H2O=AlL.H2O(s)+3H)=-6.2
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.60M C                         1981OSa (54749) 563
                                          B(-2,1,1)=-4.933
                                          B(-3,1,1)=-9.43
                                          B(-6,1,2)=-21.98
                                          B(-9,1,3)=-37.69
B(p,q,r): pH + qAl + rH3L = HpAlqH3Lr.  B(-8,2,3)=-22.65, B(-9,2,3)=-27.81,
B(-10,2,3)=-32.87, B(-11,2,3)=-39.56.
********************************************************************************
C7H6O6S               H3L                      CAS 5965-83-3  (399)
5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; HO3S.C6H3(OH).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Al+++      gl  NaClO4 25°C 0.50M C        K1=11.8   B2=21.2   1985CDa (54930) 564
-------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.10M U                            1977PTa (54931) 565
                                         K(Al+HL=AlL+H)=0.88
-------------------------------------------------------------------------------
Al+++      sp  NaClO4 29°C 1.00M U    M                      1976DDa (54932) 566
                                         K(Co(en)2(NH3)L+Al)=-0.30
-------------------------------------------------------------------------------
Al+++      gl  KNO3   20°C 0.10M U        K1=12.3   B2=22.00  1969HBb (54933) 567
                                         K3=5.8
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 30°C 0.20M U        K1=12.20  B2=22.21  1967AMa (54934) 568
-------------------------------------------------------------------------------
Al+++      sp  NaClO4 31°C 0.20M U TI                         1963NAa (54935) 569
                                         K(Al+HL=AlL+H)=0.23
K=0.79(I=0.02),0.55(I=0.05),0.37(I=0.10). Recalculated values
At I=0.1 M: K=0.22(15 C),0.41(28 C),0.53(40 C); DH=20.5 kJ mol-1, DS=58
-------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.10M U        K1=12.91  B2=22.92  1960BSb (54936) 570
By glass electrode K1=13.20, K2=9.63, K4=6.06
-------------------------------------------------------------------------------
Al+++      sp  oth/un   ?  0.20M U TI                       1957NAa (54937) 571
                                         K(Al+HL=AlL+H)=0.19
K=0.36(I=0.02),0.31(I=0.05). Recalculated values
*******************************************************************************
C7H6O9S2              H3L                    CAS 56507-30-3  (2659)
3,5-Disulfosalicylic acid; (HO3S)2.C6H2(OH).COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M C      T K1=11.51  B2=20.19  1978LAa (55091) 572
*******************************************************************************
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
-------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.20M C        K1=7.57   B2=14.60  2000FEc (55494) 573
*******************************************************************************
C7H7NS                  L    Thiobenzamide    CAS 2227-79-4  (1660)
Thiobenzamide; C6H5.CS.NH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Al+++      sp  non-aq 25°C 100%  U                          1977SWa (55702) 574
                                         K(AlCl3+L)=2.20
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
---
Al+++ sp diox/w 25°C 100% U 1976BSa (55880) 575
K(AlCl3+L)=2.26
****
C7H8N2O2 L CAS 89-62-3 (466)
2-Nitro-4-methylaminobenzene; CH3.C6H3(NO2).NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp non-aq 25°C 100% U T H 1988DNa (55887) 576
K(AlBr3+L)=1.32
By fibre-optic photometry in diethylether. DH=-44 kJ mol-1 from data at -15 to 25 C.
****
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
---
Al+++ sp diox/w 25°C 100% U 1976BSa (55903) 577
K(AlCl3+L)=2.88
****
C7H8N2O2 L CAS 611-05-2 (764)
4-Nitro-3-methylaniline; CH3.C6H3(NO2).NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp diox/w 25°C 100% U 1976BSa (55917) 578
K(AlCl3+L)=1.82
****
C7H9NO L CAS 14529-53-4 (2473)
2-Ethoxypyridine; C5H4N.OC2H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp non-aq 25°C 100% U M 1981SKe (56378) 579
K(AlCl3+L)=4.23
Medium: DMF
****
C7H9NO L CAS 13337-79-6 (2635)
N-Ethylpyridine-2-one; (O:)C5H4N-C2H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp non-aq 25°C 100% U M 1981SKe (56400) 580
K(AlCl3+L)=4.61
Medium: DMF
****

C7H9NO2 H2L DHB (8381)
3,4-Dihydroxybenzylamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C			2002AOa (56411)	581
							B(-2,1,1)=-5.58		
							B(-4,1,2)=-13.74		
							B(-6,1,3)=-25.51		
							B(-7,1,3)=-35.55		

B(-8,1,3)=-46.39, B(-9,1,3)=-56.79, B(-6,2,2)=-19.58
B(p,q,r) defined for the protonated ligand, H3L+: pH+qAl+rH3L=HpAlq(H3L)r

****

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
Al+++	gl	KNO3	25°C	0.10M	C		K1=12.20 B2=23.25	2004SGc (56423)	582
							B3=32.62		
Al+++	gl	KCl	25°C	0.10M	C		K1=12.20 B2=23.25	1994MRa (56424)	583
							K3=9.37		
Al+++	gl	KCl	25°C	0.10M	C		K1=12.20 B2=23.25	1992CMb (56425)	584
							K3=9.37		
Al+++	gl	NaCl	25°C	0.15M	C	I	K1=11.91 B2=22.83	1989CNa (56426)	585
							B3=32.35		

Data also at I=0.6 M(NaCl): K1=11.57, B2=22.01, B3=30.90

****

C7H9NO3 HL CAS 157070-43-4 (7154)
3-Hydroxy-5-methyl-2-(N-methylformamido)furan;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.60M	C		K1=7.28 B2=13.42	1994LSc (56445)	586
							K3=4.83		
							B(-1,1,1)=0.19		
							B(-2,2,1)=-0.76		
							B(-3,3,1)=-3.02		

B(-7,3,3)=-10.43, B(-4,2,1)=-12.08. B(p,q,r): pH+qHL+rM=Hp(HL)qMr.

****

C7H10O7P2 H4L CAS 2809-26-9 (8731)
1-Phenyl-1-hydroxymethylene-1,1-diphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KNO3	25°C	0.10M	C		K1=18.50	2002GKc (56762)	587
							B(AlH-1L)=13.75		

B(AlH-2L)=3.57
B(AlH3L2)=43.41
****
C7H11NO6P2 H4L CAS 4712-06-5 (4470)
Amino(phenyl)methylenediphosphonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.10M U K1=18.97 B2=26.31 1969DMd (56938) 588
K(Al+HL)=12.50
B(Al2L)=23.09
K(Al+HL+L)=19.68
****
C7H11O9P H5L (5041)
2-Phosphonobutane-1,2,4-tricarboxylic acid; HOOCCH2CH2C(PO3H2)(COOH).CH2COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaNO3 25°C 0.50M C 1999SEa (57023) 589
B(AlH-6L2)=18.42
B(AlH-6L)=16.06
****
C7H12O2 HL CAS 98-89-5 (2793)
Cyclohexanecarboxylic acid, Hexahydrobenzoic acid; C6H11.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaCl 25°C 0.60M C 1991OHa (57227) 590
B(-1,1,1)=-3.48
B(-3,2,1)=-8.04
B(p,q,r); pH+qAl+rHL=HpAlq(HL)r
****
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
---
Al+++ gl NaCl 25°C 0.60M C K1=2.94 B2=4.97 1988HBa (58943) 591
B(-2,2,1)=-2.50
B(-4,3,1)=-8.47
B(-2,2,2)=-0.07
B(p,q,r): pH+qAl+rL=HpAlqLr

Al+++ gl NaClO4 25°C 0.50M U K1=3.18 B2=6.32 1970NLa (58944) 592
****
C8H6O6 H4L (6671)
2,3-Dihydroxybenzene-1,4-dicarboxylic acid;

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

Al+++ gl KCl 25°C 0.20M C K1=3.90 1993KAa (59077) 593
B(AlH-1L)=0.96
B(AlH-2L2)=-0.36
B(AlH-3L2)=-8.11
B(Al2H-3L2)=1.36
B(Al3H-5L3)=2.27, B(Al3H-6L3)=-2.11. Ligand as H2L ?

****

C8H8NO2Cl HL CAS 2153-11-9 (4570)
N-Chloroacetyl-N-phenylhydroxylamine; Cl.CH2.CO.N(C6H5).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	mixed	30°C	50%	U		K1=6.94	B2=14.52	1971GSc (59284)	594
							K3 = 6.62			

Medium: 50% acetone/H2O, 0.5 M NaClO4

****

C8H8N2O2 H2L (3821)
1-(2'-Hydroxyphenyl)-4-oxo-2,3-diazabut-1-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	alc/w	19°C	28%	U			1963HOc (59324)	595
							K(?)=4.7		
							K(?)=9		

Medium: 28% EtOH, 0.025 M, acetate buffer

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.60M	C		K1=7.34	1999MTa (59456)	596
							B(AlH-1L)=1.97		

By spectrophotometry: K1=7.30

****

C8H8O3 H2L CAS 614-75-5 (4475)
2-Hydroxyphenylethanoic acid; HO.C6H4.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.60M	C		K1=8.06	1999MTa (59714)	597
							B(AlH-1L)=3.11		

Confirmed by H-nmr

****

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
Al+++	EMF	oth/un	?	?	U		K1=13.91	B2=26.90	1968OSb (59810)	598

K3=11.98

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	diox/w	35°C	50%	U		K1=5.39	B2=10.32	1971MAa (60082)	599

Medium: 50% dioxan, 0.1 M NaClO4

****

C8H8O5 H2L CAS 5629-08-3 (679)
7-Oxy-bicyclo[2.2.1]-hept-5-ene-2,3-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	37°C	0.15M	C			1988HYa (60124)	600
							B(AlHL)=9.279		
							B(Al+L=Al(OH)L+H)=1.565		
							B(AlHL2)=13.585		

****

C8H9NOS HL CAS 4822-44-0 (3240)
N-(Mercaptoacetyl)aniline (thioglycolanilide); C6H5.NH.CO.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	diox/w	30°C	50%	U		K1=6.94	B2=13.00	1973ABb (60158)	601

Medium: 0.1 M NaClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	1.00M	C		K1=6.15	B2=12.19	1989MSb (60246)	602

****

C8H9NO2 HL CAS 4746-61-6 (4512)
Glycolanilide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	diox/w	30°C	50%	U		K1=8.48	B2=16.17	1973ABb (60250)	603

Medium: 50% dioxan, 0.1 M NaClO4

****

C8H9NO2 HL (2591)
N-Phenyl-N-acetohydroxamic acid; CH3.CO.N(OH)C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=7.84	B2=15.10	2000FEc (60281)	604
							B(AlH-1L2)=10.77			

```
------------------------------------------------------------------------------
Al+++      gl  mixed  30°C  50%  U        K1=9.20   B2=17.30  1971GSc (60282) 605
                                         K3=7.53
Medium: 50% acetone/H2O, 0.5 M NaClO4
******************************************************************************
C8H9NO2S               HL                      CAS 6310-11-8  (4576)
3-Mercaptoacetamidophenol; HS.CH2.CO.NH.C6H4.OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  oth/un 17°C    ?  U        K1=6.72   B2=13.01  1973KPd (60382) 606
******************************************************************************
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
------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M C        K1=2.45        1981TMe (60424) 607
******************************************************************************
C8H9NO4               H2L                       (4520)
Dehydroethanoic acid oxime;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  diox/w 35°C  50%  U                        1971MAa (60488) 608
                                         K(Al+HL)=5.11
                                         K(Al+2HL)=9.57
Medium: 50% dioxan, 0.01 M NaClO4
******************************************************************************
C8H10NO6P             H3L    Codecarboxylase  CAS 41468-25-1  (2555)
Pyridoxal-5-phosphoric acid;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 1.00M C    M   K1=10.48       1985SMd (60701) 609
                                         K(AlL+H)=4.23
ternary complexes with 2-amino-3-phosphonopropionic acid
******************************************************************************
C8H10O9               H4L                      CAS 137172-86-2  (6612)
SS-Oxydisuccinic acid; O(CH(COOH)CH2.COOH)2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C        K1=8.43        1992MMa (60902) 610
                                         K(AlL+H)=3.42
                                         *K(AlL)=-5.31
                                         *K(AlH-1L)=-6.43
                                         K(Al+HL)=5.87
******************************************************************************
C8H10O9               H4L                      CAS 84852-72-2  (6611)
```

meso-Oxydisuccinic acid; O(CH(COOH)CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C		K1=9.17	1992MMa (60914)	611
							K(AlL+H)=3.37		
							*K(AlL)=-5.30		
							*K(AlH-1L)=-6.96		
							K(Al+HL)=6.57		

****

C8H10O10 H4L (5894)
1-Hydroxy-3-oxapentane-1,2,4,5-tetracarboxylic acid;
HO.CH(COOH).CH(COOH).O.CH(COOH).CH2(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C		K1=7.63	1989MMd (60926)	612
							K(AlL+H)=2.98		
							K(AlH-1L+H)=5.05		

****

C8H11NO2 H2L Dopamine CAS 579-59-9 (251)
2-(3',4'-Dihydroxyphenyl)ethylamine; (HO)2.C6H3.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C			1989KSd (61075)	613
							K(Al+HL)=15.63		
							K(AlHL+HL)=12.98		
							K(AlH2L2+HL)=8.95		

At pH 7: K1eff=8.01, K2eff=5.36, K3eff=1.33

****

C8H11NO2 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
Al+++	gl	NaCl	25°C	0.15M	C		K1=11.75 B2=22.52	1989CNa (61090)	614
							B3=32.17		

****

C8H11NO3 H2L Noradrenaline CAS 138-65-8 (253)
Norepinephrine, 3,4-Dihydroxyphenylethanolamine; (HO)2C6H3.CH(CH2.NH2).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C			1989KSd (61160)	615
							K(Al+HL)=15.60		
							K(AlHL+HL)=12.99		
							K(AlH2L2+HL)=9.27		
							B(AlHL)=25.33		

B(AlH2L2)=48.08, B(AlH3L3)=67.05. At pH 7:K1eff=8.31, K2eff=5.70, K3eff=1.98

****

C8H12N2O7 H3L (9050)
Aspartyl-aspartic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		K1=7.54 B(AlHL)=11.09 B(AlH2L)=14.42 B(AlH-1L)=3.01	2003KFa (61471)	616

****

C8H12O7P2 H4L (7244)
1-Hydroxy-2-phenylethane-1,1-diphosphonic acid; HO.C(PO(OH)2)2.CH2C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KNO3	25°C	0.10M	C		K1=18.74 B(AlH-1L)=13.26 B(AlH-2L)=2.57 B(AlH3L2)=44.74	2002GKc (61738)	617

****

C8H15N3O4 HL Gly-Ala-Ala CAS 6491-25-4 (6783)
Glycyl-alanyl-alanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KNO3	25°C	0.10M	C		K1=21.85	1983IMb (62249)	618

****

C8H16N2O4 H2L CAS 38937-66-5 (5912)
N,N-Dihydroxyoctanediamide; HN(OH).CO.(CH2)6.CO.NH(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaNO3	25°C	0.10M	C		K1=14.59	1989EHa (62538)	619

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sol	NaCl	25°C	0.10M	U	T	K=2.63	1990WPa (63054)	620

K=2.6 at 50 C. K: Al(OH)4+H2L=Al(OH)2L+2H2O

****

C9H6NOCl HL CAS 130-16-5 (1268)
5-Chloro-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	diox/w	25°C	60%	U			1973SCd (63658)	621

B3=31.83
Medium: 60% dioxan, 0.1 M NaClO4
****
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
Al+++	sp	NaCl	25°C	1.0M	C		K1=8.0		1988NMa (63776)	622
Medium pH 1.8-3.5										
Al+++	sp	KCl	25°C	0.14M	U	I	K1=7.9	B2=15.10	1982GTa (63777)	623
							K3=7.2			
In Al(III)-ferron-CTMAC solution: K1=8.5, K2 < 5.8, K3 > 10.8										
Al+++	sp	oth/un	?	dil	U		B2=12.5		1971BRf (63778)	624
Al+++	gl	KNO3	28°C	0.10M	U		K1=6.76	B2=13.76	1971LSb (63779)	625
Al+++	gl	KCl	25°C	0.10M	U		K1=7.6	B2=14.7	1961LSa (63780)	626
							K3=5.6			
							K(Al(OH)L2+H)=5.0			

****
C9H6N2O3 HL CAS 5437-99-0 (3865)
5-Nitro-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	diox/w	25°C	60%	U				1973SCd (63860)	627
							B3=21.42			
Medium: 60% dioxan, 0.1 M NaClO4										

****
C9H6O7 H4L CAS 609-98-3 (4591)
2-Hydroxybenzene-1,3,5-tricarboxylic acid; HO.C6H2(COOH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	EMF	NaCl	25°C	0.10M	U				1971PPe (64004)	628
							K(Al+H2L)=4.97			

****
C9H6O7 H4L CAS 54176-76-0 (4592)
5-Hydroxybenzene-1,2,4-tricarboxylic acid; HO.C6H2(COOH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	EMF	NaCl	25°C	0.10M	U				1971PPe (64008)	629
							K(Al+H2L)=4.40			

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	oth	oth/un	25°C	0.05M	U				1989WHa (64233)	630
							K(Al+HL=AlL+H)=0.08			

By fluorescence on silica immobilized ligand

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	diox/w	25°C	50%	U		K1=11.17	B2=22.59	1978THc (64234)	631
							B3=32.74			
							B(AlHL)=14.56			
							B(AlHL2)=25.73			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	diox/w	25°C	60%	U				1973SCd (64235)	632
							B3=33.75			

Medium: 60% dioxan, 0.1 M NaClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	alc/w	?	20%	U				1971BRf (64236)	633
							B3=33.42			

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	diox/w	30°C	50%	U		K1=9.30	B2=18.55	1970GMb (64399)	634

Medium: 50% dioxan, 0.3 M NaClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	oth/un	?	?	U		K1=9.69	B2=18.70	1973BIb (64524)	635

****

C9H7N3O2S H2L CAS 22525-35-3 (4673)
4-(2'-Thiazolylazo)-1,2-dihydroxybenzene; C3H2NS.N:N.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	alc/w	22°C	2%	U				1973PPa (64665)	636
							K(AlOH+2HL)=14.62			

****

C9H8BrNOS HL CAS 292149-06-5 (8797)
4-Bromo-2-(4,5-dihydro-2-thiazolyl)phenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	sp	alc/w	25°C	73%	C				2000LTb (64748)	637
							K(Al+HL=AlL+H)=3.746			

Medium: 73.2% v/v MeOH, 2.4% DMF, 24.4% H2O, 0.10 M NaClO4.

By fluorescence, K(Al+HL=AlL+H)=3.590.

****

C9H8N2O3S HL CAS 292149-08-7 (8799)
2-(4,5-Dihydro-2-thiazolyl)-4-nitrophenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	alc/w	25°C	73%	C		K(Al+HL=AlL+H)=4.65	2000LTb (64810)	638

Medium: 73.2% v/v MeOH, 2.4% DMF, 24.4% H2O, 0.10 M NaClO4.

****

C9H8N2O3S HL CAS 292149-08-7 (8798)
2-(4,5-Dihydro-2-thiazolyl)-5-nitrophenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	alc/w	25°C	73%	C		K(Al+HL=AlL+H)=4.08	2000LTb (64812)	639

Medium: 73.2% v/v MeOH, 2.4% DMF, 24.4% H2O, 0.10 M NaClO4.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	KCl	25°C	0.10M	C		B2=22.0	1996LHa (64814)	640
							K(AlL2+H)=6.8		
							K(AlHL2+H)=3.7		

****

C9H8N2O4S H2L CAS 15851-62-4 (3886)
7-Amino-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	NaNO3	25°C	0.10M	C		K1=8.52	1995SOa (64823)	641

****

C9H8O4 H3L Caffeic acid CAS 331-39-5 (6037)
3-(3,4-Dihydroxyphenyl)propenoic acid; (HO)2C6H3.CH:CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C		B(-2,1,1)=-4.88	2002AOa (64917)	642
							B(-3,1,1)=-9.45		
							B(-4,1,1)=-15.53		
							B(-6,1,2)=-22.24		

B(-7,1,2)=-30.73, B(-9,1,3)=-39.23.
B(p,q,r): pH+qAl+rH3L=HpAlq(H3L)r

Al+++	sp	none	25°C	0	U		K1=15.06	1990SMd (64918)	643

****
C9H9NOS HL CAS 101821-30-1 (8796)
2-(4,5-Dihydro-2-thiazolyl)phenol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp alc/w 25°C 73% C 2000LTb (65028) 644
K(Al+HL=AlL+H)=3.75
Medium: 73.2% v/v MeOH, 2.4% DMF, 24.4% H2O, 0.10 M NaClO4.
By fluorescence, K(Al+HL=AlL+H)=3.50.
****
C9H9N3O2S2 HL Sulfathiazole CAS 72-14-0 (8357)
4-Amino-N-2-thiazolyl-benzenesulfonamide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl alc/w 25°C 50% C K2=6.70 1999GAa (65132) 645
Medium: 50% EtOH/H2O, 0.10 M NaNO3.
****
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
---
Al+++ gl KNO3 35°C 0.10M U M 1980KHb (65923) 646
B(AlL(tripolyphosphate))=7.55
****
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
---
Al+++ gl KNO3 35°C 0.10M U M 1980KHb (66210) 647
B(AlHL(tripolyphosphate))=7.95
****
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
---
Al+++ gl KNO3 25°C 0.10M C K1=13.04 B2=24.06 2002SGb (66302) 648
****
C9H11NO4 H3L DOPA CAS 59-92-7 (5)
2-Amino-3-(3,4-dihydroxyphenyl)propanoic acid;H2NCH(CH2C6H3(OH)2)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C 1989KSd (66392) 649
K(Al+HL)=16.03
K(AlHL+HL)=13.21

K(AlH2L2+HL)=9.12
At pH 7: K1eff=8.08, K2eff=5.36, K3eff=1.17

Al+++ gl NaCl 25°C 0.12M U K1=19.60 1978RMc (66393) 650
****
C9H12NO6P H3L PhosphoTyrosine CAS 41863-47-2 (5813)
Phosphotyrosine; 4-((OH)2P(O).O)C6H4.CH2.CH(NH2)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=10.37 1998KLb (66552) 651
B(AlHL)=14.42
B(AlH-1L)=4.08
****
C9H13NO2 L (7151)
1,2-Diethyl-3-hydroxy-4-pyridinone

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.10M C K1=13.42 B2=25.06 1994MRa (66793) 652
K3=8.48
****
C9H13NO3 H2L (-)Adrenaline CAS 51-43-4 (252)
4-(1-Hydroxy-2-(methylamino)ethyl)-1,2-dihydroxybenzene,
Epinephrine;CH3NHCH(OH)C6H3(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C 1989KSd (66857) 653
K(Al+HL)=15.57
K(AlHL+HL)=13.03
K(AlH2L2+HL)=9.25
B(AlHL)=25.81
B(AlH2L2)=49.08, B(AlH3L3)=68.57. At pH 7:K1eff=8.22, K2eff=5.68, K3eff=1.90
****
C9H13N2O9P H3L UMP-5 CAS 58-97-9 (2948)
Uridine-5'-monophosphoric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=11.18 B2=17.49 1996AKa (66969) 654
B(AlHL)=14.83
****
C9H14N3O8P H2L CMP-5 CAS 63-37-6 (1243)
Cytidine-5'-monophosphoric acid, Cytidilic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=6.08 B2=9.7 1996AKa (67248) 655
B(AlHL)=9.0

B(AlH-1L)=0.39

****

C9H14O7P2 H2L CAS 445253-97-4 (8732)
[(Dimethoxyphosphinyl)hydroxyphenylmethyl]phosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KNO3	25°C	0.10M	C		B2=12.21	2002GKc (67375)	656
							B(AlH-3L)=-11.91		
							B(AlHL2)=16.30		
							B(AlH-1L2)=6.06		
							B(AlH-2L2)=-0.78		

****

C9H18N2O4 H2L CAS 18992-11-5 (5913)
N,N-Dihydroxynonanediamide; HN(OH).CO.(CH2)7.CO.NH(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaNO3	25°C	0.10M	C		K1=15.55	1989EHa (67937)	657

****

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
Al+++	gl	KNO3	25°C	1.00M	U		K1=18.6	1990BSd (68310)	658
							K(Al+HL)=12.6		
							K(Al+H2L)=10.3		
							K(Al+H3L)=7.6		

****

C10H6O8 H4L Pyromellitic Ac CAS 89-05-4 (519)
Benzene-1,2,4,5-tetracarboxylic acid; C6H2.(COOH)4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.10M	C		K1=4.44	1998NPa (68507)	659
							B(AlHL)=8.44		
							B(AlH-1L)=-0.25		

****

C10H8O5S H2L CAS 16223-97-7 (2392)
1,2-Dihydroxynaphthalene-4-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.60M	C			1983OSb (69806)	660
							B(-2,1,1)=-5.343		
							B(-3,1,1)=-11.24		
							B(-4,1,2)=-13.115		
							B(-5,1,2)=-21.15		

B(p,q,r); pH+qAl+rH2L=HpAlqH2Lr. B(-6,1,3)=-24.47

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	C		K1=15.7 B2=29.1	1985CDa (69834)	661
Al+++	gl	NaNO3	25°C	0.10M	U		K1=16.48 B2=29.82 B3=39.12	1984NHa (69835)	662
Al+++	gl	NaClO4	25°C	0.50M	C		K1=15.10 B2=27.88 B3=37.47	1976LAe (69836)	663

****

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
Al+++	gl	NaNO3	25°C	0.10M	U		K1=17.18 B2=30.10	1990HWa (69920)	664
Al+++	gl	NaClO4	25°C	0.50M	C		K1=12.9 B2=22.5	1985CDa (69921)	665
Al+++	kin	NaClO4	25°C	0.50M	C		K(Al+H2L=AlL+2H)=-2.82	1981BMg (69922)	666

Method: stopped-flow.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KNO3	20°C	0.10M	U		K1=17.1 B2=29.80	1969HBb (69923)	667
Al+++	gl	NaClO4	30°C	0.20M	U		K1=17.16 B2=30.41	1967AMa (69924)	668
Al+++	con	KNO3	?	0.10M	U		K1=17.22	1965DMa (69925)	669

By glass electrode: K1=17.40, K2=16.86

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	oth/un	25°C	0.01M	U		K(Al+H2L=AlL+2H)=-3.87	1957JAc (69926)	670

****

C10H9NO HL 8-OH-Quinaldine CAS 826-81-3 (998)
2-Methyl-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	alc/w	?	100%	U		K1=8?	1962OBa (70043)	671

Medium: EtOH

****

C10H9NO HL CAS 5541-67-3 (999)
5-Methyl-8-hydroxyquinoline;

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

Al+++ gl diox/w 25°C 50% U B2=20.52 1978THc (70063) 672
B3=30.53
B(AlHL)=15.08
B(AlHL2)=25.24
****
C10H9NO3S H2L CAS 49608-51-7 (8280)
4,5-Dihydro-2-(2-hydroxyphenyl)-4-thiazolecarboxylic acid,
Deazademethyldesferrithiocin;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp alc/w 25°C 75% C 2000LTb (70167) 673
K(Al+H2L=AlL+2H)=3.38
Medium: 75% v/v MeOH/H2O, 0.10 M NaClO4.
By fluorescence, K(Al+H2L=AlL+2H)=3.26

Al+++ gl KNO3 25°C 0.10M C K1=12.22 B2=22.82 1990ARa (70168) 674
****
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
---
Al+++ sp KCl 25°C 0.10M C B2=23.6 1996LHa (70558) 675
K(AlL2+H)=6.6
K(AlHL2+H)=3.3

Al+++ gl KNO3 25°C 0.10M C B2=22.2 1990ARa (70559) 676
****
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
---
Al+++ gl KNO3 25°C 0.10M C K1=13.03 B2=22.97 2002SGb (71755) 677
B3=31.27
B(AlHL2)=27.34
B(AlH2L2)=30.26
****
C10H14N5O7P H2L AMP-5 CAS 18422-05-4 (842)
Adenosine-5'-monophosphoric acid, 5-Adenylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=6.14 1996AKa (72439) 678
B(AlH-1L)=1.90

Al+++ gl KCl 25°C 0.20M U K1=6.17 B2=10.35 1991KSb (72440) 679
B(AlH-1L)=2.02

****
C10H14N5O8P H3L GMP-5 CAS 85-32-5 (2947)
Guanosine-5'-monophosphoric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=11.66 1996AKa (72585) 680
B(AlHL)=14.91
****
C10H15N2O8P H2L TMP-5 CAS 365-07-1 (2949)
Thymidine-5'-monophosphoric acid, Thymidylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=11.92 B2=18.66 1996AKa (72698) 681
B(AlHL)=15.41
B(AlH-1L)=5.6
****
C10H15N5O10P2 H3L ADP CAS 20398-34-9 (2181)
Adenosine-5'-diphosphoric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M U K1=7.82 B2=12.16 1991KSb (72976) 682
B(AlHL)=10.98
B(AlH-1L)=2.94
B(AlH-1L2)=5.01

Al+++ gl NaCl 25°C 0.15M U K1=10.03 1987JVa (72977) 683
B(AlH-1L)=4.18
****
C10H16N2O8 H4L EDDS CAS 52759-67-8 (1100)
1,2-Diaminoethane-N,N'-di-1,4-butanedioic acid; (CH2.NH.CH(COOH)CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ dis KNO3 20°C 0.10M U K1=14.8 1968MJa (73111) 684
Method: paper electrophoresis
****
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
---
Al+++ cal none 25°C 0.0 C H 1990OBa (73567) 685
Medium: pH 8.7. DH(K1)=48.96 kJ mol-1.

Al+++ gl KNO3 25°C 0.50M C M 1989TBa (73568) 686
K(AlL+H)=2.41
*K(AlL)=-5.81

```
                                        K(AlL+F)=4.8
                                        K(AlL+S)=10.3
--------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.50M C    M                  1986TBa (73569) 687
                                        K(AlL+H)=2.41
                                        *K(AlL)=-5.81
                                        K(AlL+F)=4.8
                                        K(Al(OH)L+HS=AlLS)=10.3
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.12M C        K1=15.3        1981RMb (73570) 688
                                        *K(AlL)=-5.73
                                        *K(AlH-1L)=-9.82
--------------------------------------------------------------------------------
Al+++      gl  KNO3   35°C 0.10M U        K1=16.95       1980KHb (73571) 689
--------------------------------------------------------------------------------
Al+++      vlt oth/un   ?  1.08M U        K1=15.9        1969SVd (73572) 690
Medium: K2SO4, pH=2.7
--------------------------------------------------------------------------------
Al+++      ISE KNO3   25°C 0.10M U        K1=16.5        1967ABb (73573) 691
                                        K(Al+HL)=3.4
                                        K(AlL+OH)=8.0
--------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.20M U        K1=16.01       1967BDb (73574) 692
By glass electrode: K(AlL+H)=2.63, K(AlLOH+H)=5.87, K(AlL(OH)2+H)=10.31
--------------------------------------------------------------------------------
Al+++      ISE KNO3   20°C 0.10M U T H  T K1=16.7        1966MCa (73575) 693
                                        K(AlL+H)=2.77
K1=16.84(30 C),17.26(40 C). DH(K1)=50.2 kJ mol-1, DS=489 J K-1 mol-1
--------------------------------------------------------------------------------
Al+++      dis NaClO4 20°C 0.10M U                       1963STc (73576) 694
                                        B(AlL(OH))=25.04
Medium: KClO4
--------------------------------------------------------------------------------
Al+++      cal KNO3   20°C 0.10M U   H                  1958SRa (73577) 695
DH(K1)=52.6 kJ mol-1, DS=487 J K-1 mol-1
--------------------------------------------------------------------------------
Al+++      gl  KNO3   15°C 0.10M U        K1=16.11       1956STa (73578) 696
                                        K(AlL+H)=2.0
                                        K(AlLOH+H)=5.16
--------------------------------------------------------------------------------
Al+++      vlt KNO3   20°C 0.10M U      T K1=16.13       1954SGa (73579) 697
                                        K(Al+HL)=8.4
                                        K(AlLOH+H)=5.89
                                        K(AlL(OH)2+H)=9.97
********************************************************************************
C10H16N5O13P3         H4L    ATP              CAS 56-65-5  (403)
Adenosine-5'-triphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Al+++      nmr oth/un 25°C    ?  U                        1994DBa (74697) 698
                                        K1eff=2.4
                                        K2eff=2.1
At pH 7.4
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.20M U        K1=7.92   B2=12.47  1991KSb (74698) 699
                                        B(AlHL)=11.30
                                        B(AlH-1L)=2.46
                                        B(AlH-1L2)=4.84
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.15M U                       1987JVa (74699) 700
                                        B(AlHL)=12.47
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      gl  KNO3   35°C 0.10M U        K1=15.68       1980KHb (75329) 701
--------------------------------------------------------------------------------
Al+++      ISE KNO3   25°C 0.10M U        K1=14.4        1967ABb (75330) 702
                                        K(AlL+H)=2.4
                                        K(AlL+OH)=9.3
--------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.20M U        K1=13.96       1967BDb (75331) 703
By glass electrode: K(AlL+H)=2.14, K(AlLOH+H)=4.89, K(AlL(OH)2+H)=9.19
--------------------------------------------------------------------------------
Al+++      ISE KNO3   20°C 0.10M U T H    K1=12.43       1966MCa (75332) 704
                                        K(AlL+H)=5.08
K1=12.6(30 C),12.9(40 C). DH(K1)=37.6 kJ mol-1, DS=372 J K-1 mol-1
********************************************************************************
C10H18O                 L                       (6695)
4-tert-Butylcyclohexanone;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      nmr non-aq 25°C 100%  U T                  1993HMb (75586) 705
                                        K(Al(OR)3+L)=2.08
Medium: C6D6. At 15 C: K=2.39; 37 C: K=1.81
********************************************************************************
C10H20N2O4            H2L                     CAS 5578-84-7  (5914)
N,N-Dihydroxydecanediamide; HN(OH).CO.(CH2)8.CO.NH(OH)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  NaNO3  25°C 0.10M C        K1=15.29       1989EHa (75798) 706
********************************************************************************
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
-------------------------------------------------------------------------
Al+++      gl  R4N.X  25°C 0.05M U        K1=9.3         1999BDb (76306) 707
Medium: Et4NClO4
*************************************************************************
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
-------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.10M U                       1982PRa (76949) 708
                                       K(Al+H2L=AlL+2H)=-4.16
*************************************************************************
C11H8O3               H2L                    CAS 92-70-6  (1130)
2-Hydroxy-3-naphthoic acid (3-Hydroxy-2-naphthoic acid);
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      sp  oth/un 60°C 0.02M U TIH                   1967GSf (77112) 709
                                       K(Al+HL=AlL+H)=5.42
y=4.55(20 C),4.77(30 C),4.90(40 C),5.18(50 C). DH=-39.7 kJ mol-1, DS=217?
At 20 C: K=4.38(I=0.06),4.26(I=0.09),4.17(I=0.11),4.07(I=0.16),3.97(I=0.21).
-------------------------------------------------------------------------
Al+++      sp  oth/un 25°C  0.0  U  I     K1=13.38       1966MAh (77113) 710
In KCl: K(Al+HL=AlL+H)=-0.54+4.072sqrtI/(1+2.22sqrtI)-0.03I (?)
*************************************************************************
C11H8O4                HL                     CAS 7555-37-5  (4812)
3-Acetyl-4-hydroxycoumarin
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  diox/w 35°C  50%  U        K1=4.52   B2=8.22   1971MAa (77170) 711
Medium: 50% dioxan, 0.01 M NaClO4
*************************************************************************
C11H8O4                HL                     CAS 6724-42-1  (6183)
8-Formyl-7-hydroxy-4-methyl-2H-1-benzopyran-2-one; CHO.C9H3O(:O)(CH3)(OH)
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  alc/w  35°C  70%  U        K1=6.83   B2=12.22  1988KRc (77196) 712
*************************************************************************
C11H8O6S              H3L                    CAS 66695-90-7  (1996)
1-Hydroxy-4-sulfo-2-naphthoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  NaClO4 25°C 0.50M C        K1=12.64  B2=21.89  1988LKa (77219) 713
                                       B(AlH-1L2)=13.98
                                       B(AlH-2L2)=5.32
K1 measured by spectrophotometry
```

****

C11H8O6S H3L CAS 6407-91-6 (1994)
1-Hydroxy-7-sulfo-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	C		K1=13.88 B2=23.52 B(AlH-1L2)=15.22 B(AlH-2L2)=6.54	1988LKa (77238)	714

K1 measuerd by spectrophotometry

****

C11H8O6S H3L CAS 15509-36-1 (2658)
3-Hydroxy-7-sulfo-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	NaClO4	25°C	0.10M	U	I	K1=11.934	1980LPf (77247)	715

In 0.1 M KCl: K1=11.316

****

C11H8O7S H4L CAS 6407-90-5 (2683)
1,7-Dihydroxy-4-sulfo-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	C		K1=14.95 B2=22.14 B3=28.21 B(AlHL2)=30.80 B(AlHL)=20.00	1982LAa (77262)	716
Al+++	gl	NaClO4	25°C	0.50M	C		K1=14.92 B2=22.14 B3=28.21 B(AlHL)=20.00 B(AlHL2)=30.80	1982LKc (77263)	717

****

C11H8O7S H4L CAS 6470-93-5 (8345)
3,5-Dihydroxy-7-sulfo-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	C		K1=16.00 B2=24.09 B3=30.85 B(AlHL)=20.65 B(AlHL2)=32.44	1982LAa (77268)	718

****

C11H8O9S2 H4L CAS 67097-84-1 (1995)
1-Hydroxy-4,7-disulfo-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	C		K1=12.38 B2=21.55	1988LKa (77274)	719

B(AlH-1L2)=13.66
K1 measured by spectrophotometry
****
C11H8O9S2 H4L CAS 67097-83-0 (1618)
3-Hydroxy-5,7-disulfo-2-naphthoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaClO4 25°C 0.50M C K1=10.81 B2=19.26 1978LAa (77293) 720
****
C11H9NO2 HL CAS 92609-55-3 (4827)
5-Acetyl-8-hydroxyquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl diox/w 25°C 60% U 1973SCd (77327) 721
B3=26.64
Medium: 60% dioxan, 0.1 M NaClO4
****
C11H9NO4 H2L CAS 4321-82-7 (4829)
3-Acetyl-4-hydroxycoumarin oxime;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl diox/w 35°C 50% U 1971MAa (77412) 722
K(Al+HL)=4.32
K(Al+2HL)=7.69
Medium: 50% dioxan, 0.01 M NaClO4
****
C11H9N3O2 H2L PAR CAS 1141-59-9 (636)
4-(2'-Pyridylazo)-1,3-dihydroxybenzene; C5H4N.N:N.C6H3(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ vlt NaClO4 25°C 0.10M U 1975TBc (77526) 723
K(Al+2HL)=23.52

Al+++ sp NaClO4 20°C 0.10M U K1=11.5 1967SNb (77527) 724
****
C11H10N2O6S H3L (7533)
7-(2-Carboxymethyl)amino-8-hydroxyquinoline-5-sulfonic acid; HOOCCH2NHC9H4N(OH)HSO3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaNO3 25°C 0.10M M K1=11.23 B2=22.17 1996SOa (77682) 725
K(Al+HL)=10.52
K(Al+2HL)=21.17
****
C11H11NO6 H3L CAS 1147-65-5 (425)
N-(2'-Carboxyphenyl)iminodiethanoic acid; HOOC.C6H4.N(CH2.COOH)2

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  oth/un 25°C  dil  U                        1970DPb (77821) 726
                                      K(Al+HL)=4.60 at pH 3
********************************************************************************
C11H14N2O3             HL    Gly-Phe          CAS 3321-03-7  (829)
Glycyl-phenylalanine; H2N.CH2.CO.NH.CH(CH2.C6H5).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KNO3   35°C 0.10M U    M                   1980KHb (78811) 727
                                      B(AlL(tripolyphosphate))=4.33
********************************************************************************
C11H15NO4              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
--------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M C        K1=13.23  B2=23.41  2002SGb (79035) 728
                                      B3=31.60
                                      B(AlHL2)=27.76
                                      B(AlH2L2)=30.69
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 1.00M C        K1=18.68  B2=25.10  1989MSb (79186) 729
                                      K(AlL+H)=4.86
                                      K(AlHL+H)=3.23
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      gl  KNO3   20°C 0.10M U        K1=16.33       1964LAa (79420) 730
By polarography: K1=16.31
********************************************************************************
C11H18N2O9             H4L    HDPTA          CAS 3148-72-9  (431)
1,3-Diamino-2-hydroxypropane-N,N,N',N'-tetraethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M U        K1=15.2        1971KRa (79540) 731
                                      K(Al(OH)L+H)=6.70
                                      K(Al(OH)2L+H)=8.70
                                      B(Al2L)=16.6
```

K(Al2(OH)L+H)=1.0
K(Al2(OH)2L+H)=3.55, K(Al2(OH)3L+H)=6.20
****
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
---
Al+++ sp KCl 25°C 0.10M U 1962KMa (80699) 732
K(Al+H2L=AlL+2H)=3.1
K(AlL+H2L=AlL2+2H)=7.4(?)
****
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
---
Al+++ sp oth/un 25°C 0.10M U 1967NNa (80720) 733
K(Al+HL)=12.28
K(AlOH+2HL)=29.55
****
C12H10O6S H4L CAS 41279-65-6 (1397)
3,3',4,4'-Tetrahydroxydiphenylsulfone; (HO)2.C6H3.S(:O)2.C6H3.(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KNO3 25°C 0.20M U K1=14.93 B2=27.58 1982HOb (80802) 734
K3=9.24
****
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
---
Al+++ gl NaCl 25°C 0.15M C T K1=11.36 B2=21.78 1991ZRa (80821) 735
B3=30.74
B3(eff)=24.74
At 37C: K1=11.86, B2=23.13, B3=32.44, B3(eff)=25.81
B3(eff) in 0.15M NaCl, pH 7.4
****
C12H12NO3Cl HL (1055)
2-Chloro-4-dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H3Cl.CH:CH.CO.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp NaClO4 25°C 0.50M C K1=1.979 1984MTa (80961) 736
****
C12H12N2O6S H3L (7532)
7-(2-Carboxyethyl)amino-8-hydroxyquinoline-5-sulfonic acid;
HOOC(CH2)2.NH.C9H4N(OH)(SO3H)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaNO3 25°C 0.10M M K1=11.88 B2=22.34 1996SOa (81106) 737
K(Al+HL)=10.91
K(Al+2HL)=21.20
****
C12H13NO3 HL (1054)
4-Dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H4.CH:CH.CO.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp NaClO4 25°C 0.50M C K1=2.563 1984MTa (81191) 738
****
C12H14N4O2S L Sulfadimidine CAS 57-68-1 (6167)
2-(4-Aminobenzolsulfamido)-4,6-dimethylpyrimidine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl alc/w 25°C 50% C K1=8.55 B2=15.00 1999GAa (81366) 739
Medium: 50% EtOH/H2O, 0.10 M NaNO3.
****
C12H14O14 H6L CAS 111451-17-3 (5895)
3,6-Dioxaoctane-1,2,4,5,7,8-hexacarboxylic acid; (CH2(COOH).CH(COOH).O.CH(COOH)-)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.10M C K1=8.56 1989MMd (81415) 740
K(AlL+H)=5.73
K(AlHL+H)=3.23
K(AlL+Al)=1.2
K(AlH-1L+H)=4.95
B(Al2H-1L)=10.96
****
C12H17N3O10 H4L Asp-Asp-Asp (6445)
Aspartyl-aspartyl-aspartic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=8.45 2003KFa (81735) 741
B(AlHL)=12.33
B(AlH2L)=15.51
B(AlH-1L)=3.00
****
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
---
Al+++ gl KNO3 25°C 0.10M C K1=7.47 B2=14.41 1988YSc (81805) 742

****

C12H19NO2 HL (5890)
3-Hydroxy-2-methyl-1-hexylpyridin-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.15M	C		K1=11.51 B2=22.49 B3=31.71	1989CNa (81976)	743

****

C12H20N2O8 H4L BDTA CAS 868-43-9 (1742)
DL-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	oth	KNO3	20°C	0.10M	U		K1=18.5	1965JMb (82282)	744

Method: electrophoresis

****

C12H20N2O8 H4L CAS 22968-57-6 (3992)
meso-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	oth	KNO3	20°C	0.10M	U		K1=16.5	1965JMb (82383)	745

Method: electrophoresis

****

C12H22O12 HL Lactobionic acd 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
Al+++	gl	NaNO3	25°C	0.10M	C		B(AlH-3L)=-11.98	1995EOa (82927)	746

****

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
Al+++	gl	R4N.X	25°C	0.05M	U		K1=9.4	1999BDb (83812)	747

Medium: Et4NClO4

****

C12H26O4S HL SDS CAS 151-21-3 (2522)
Dodecyl sulfate; CH3(CH2)11.OSO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	dis	NaNO3	25°C	0.10M	C	M	Kout(AlA+L=AlAL)=1.95	1994BSb (83979)	748

At pH 6.88. A=Ferrioxamine B.

****

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
Al+++	gl	KCl	25°C	0.10M	C		K1=14.23 B2=26.25 B(AlHL2)=30.50	1995HKb (84067)	749
Other models also considered., e.g. K1=14.21, B2=26.23, B(AlH-1L)=8.71									
Al+++	gl	KCl	25°C	0.10M	C		K1=16.74 B2=30.25 B(AlHL2)=34.37	1995HKb (84068)	750
Other models also considered., e.g. K1=16.62, B2=30.22, B(AlH-1L)12.53									
Al+++	gl	KCl	25°C	0.10M	U		K1=14.3 B2=26.4 B(AlH-1L)=8.9 B(AlHL2)=30.6	1992KHa (84069)	751

****

C13H8O3 HL CAS 719-41-5 (3397)
1-Hydroxyxanthone (1-Hydroxy-9-xanthenone)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	alc/w	25°C	50%	U		K1=10.37	1968GDb (84494)	752
Medium: 50% EtOH, 0.1 M NaClO4									

****

C13H9NO3 H2L (6878)
2-Hydroxy-1-carbazole carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	25°C	?	U		K(Al+HL=AlL+H)=0.97 K(AlLOH+H)=6.2 K(AlL(OH)2+2H)=11.9 K(Al2LOH+3H=AlL+Al)=11.8	1993TPa (84596)	753
K(Al3L(OH)4+4H=AlL+2Al)=12.7. Method: fluorescence spectroscopy									

****

C13H9N3OS HL TAN CAS 1147-56-4 (4030)
1-(1',3'-Thiazol-2'-ylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	vlt	NaClO4	25°C	0.10M	U		B2=14.28	1975TBc (84614)	754

****

C13H9N3O8S3 H3L CAS 28467-51-8 (898)
2-(2-Thiazolylazo)chromotropic acid;

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

```
------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.10M U                      1982PRa (84663) 755
                                        K(Al+H2L=AlL+2H)=-2.70
******************************************************************************
C13H10N2O4             HL                     CAS 13245-57-3  (4983)
N-4-Nitrobenzoyl-N-phenylhydroxylamine; O2N.C6H4.CO.N(C6H5)OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  mixed  30°C  50%  U        K1=8.27   B2=15.89  1971GSc (84882) 756
                                        K3=6.73
Medium: 50% v/v acetone/H2O, 0.5 M NaClO4
******************************************************************************
C13H10N2O4             HL                     CAS 2029-61-0  (178)
N-Phenyl-2-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H5).OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  mixed  30°C  50%  U        K1=6.60   B2=14.07  1971GSc (84895) 757
                                        K3=6.73
Medium: 50% v/v acetone/H2O, 0.5 M NaClO4
******************************************************************************
C13H10N2O4             HL                     CAS 17120-18-2  (220)
N-Phenyl-3-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H5).OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      gl  mixed  30°C  50%  U        K1=8.32   B2=16.07  1971GSc (84907) 758
                                        K3=6.77
Medium: 50% v/v acetone/H2O, 0.5 M NaClO4
******************************************************************************
C13H11N                 L    3-Stilbazole       (6869)
(3-Pyridyl)styrene; C5H4N.CH:CH.C6H5
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      sp  non-aq 25°C 100%  U    M                  1993IWa (85006) 759
                                        K(AlACl+L)=-2.54 (L is trans)
                                        K(AlACl+L)=-2.62 (L is cis)
Medium:Dichloroethane. H2A:Tetraphenylporphyrin
******************************************************************************
C13H11N                 L    4-Stilbazole       (6868)
(4-Pyridyl)styrene; C5H4N.CH:CH.C6H5
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Al+++      sp  non-aq 25°C 100%  U    M                  1993IWa (85007) 760
                                        K(AlACl+L)-1.98 (L is trans)
                                        K(AlACl+L)=-1.98 (L is cis)
Medium:Dichloroethane. H2A:Tetraphenylporphyrin
```

****

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
Al+++	gl	diox/w	25°C	50%	U		K1=9.65	B2=19.31	1972GDb (85136)	761
							B3=27.81			

Medium: 50% dioxan, 0.25 M NaClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	mixed	30°C	50%	U		K1=8.98	B2=17.01	1971GSc (85137)	762
							K3=7.52			

Medium: 50% v/v acetone, 0.5 M NaClO4

****

C13H11NO5 HL Oxolinic acid CAS 14698-29-4 (2755)
1-Ethyl-6,7-dioxymethylene-quinoline-4-one-3-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	25°C	0.05M	C			2000MPa (85217)	763
							K1eff=6.39		

Medium: 0.05 M chloroethanoate buffer, pH=3.0. Method: spectrofluorimetry.

****

C13H11NO5S H2L CAS 23117-22-8 (6287)
N-Benzoyl-4-hydroxylaminobenzene sulfonic acid; C6H5.CO.N(OH).C6H4HSO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Al+++	gl	NaNO3	30°C	0.50M	U		K1=6.98	B2=13.50	1976GMc (85220)	764
							B3=18.88			

****

C13H11N3O4S2 HL Tenoxicam CAS 59804-37-4 (8393)
4-Hydroxy-2-methyl-N-2'-pyridinyl-2H-thien[2,2-e]-1,2-thiazine-3-carboxamide-1,1-di
oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	mixed	25°C	50%	C		K2=5.5	2002MWa (85286)	765

Medium: 50% v/v CH3CN/H2O, 0.05 M NaNO3.

****

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
Al+++	gl	KCl	25°C	0.10M	C			2002AOa (86709)	766
							B(-2,1,1)=-2.550		
							B(-4,1,2)=-5.236		
							B(-10,2,4)=-22.77		

B(p,q,r) defined for the deprotonated ligand H2L-: pH+qAl+rH2L=HpAlq(H2L)r

B(-2,1,1) determined by spectrophotometry.

Al+++ gl NaClO4 25°C 0.10M M T K1=14.11 B2=26.69 1989COa (86710) 767

Al+++ gl oth/un 25°C 0.00 U 1988RCa (86711) 768
B(AlH2L2)=12.88

Al+++ sp NaClO4 20°C 0.10M M K1=14.11 B2=26.92 1987COa (86712) 769
B(Al(OH)L2)=34.1

Al+++ EMF oth/un ? 0.10M U K1=11.31 B2=17.37 1972GBc (86713) 770

Al+++ sp NaClO4 rt 0.10M U 1971NOc (86714) 771
K(Al+2H2L)=11.5

Al+++ sp oth/un 25°C 0.10M U 1968BNa (86715) 772
K(Al+2HL)=12.06

****

C14H8O7S H3L (4037)
1,4-Dihydroxyanthraquinone-2-sulfonic acid, quinizarin-2-sulfonic acid;

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

---

Al+++ gl KNO3 25°C 0.05M C K1=9.04 1993PFa (86777) 773
B(AlH-1L)=4.33
B(AlH-2L)=-1.47
B(Al2H-1L)=8.89
B(Al2H-3L)=0.80

****

C14H10NO2F3 HL CAS 530-28-9 (2574)
N-(3-Trifluoromethylphenyl)-2-aminobenzoic acid; HOOC(C6H4)NH(C6H4)CF3

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

---

Al+++ gl mixed 22°C 90% U K1=5.95 1982GKb (86896) 774
Medium: 90% DMF/H2O

****

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

---

Al+++ sp NaClO4 ? 0.10M U 1971NPb (86934) 775
K(Al+H3L)=7.9
K(Al+H4L)=6.3

****

C14H11N5O8S2 H5L CAS 1105-53-9 (5084)
1,5-Bis(2-hydroxy-5-sulfophenyl)-3-cyanoformazan;

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

```
--------------------------------------------------------------------------------
Al+++      gl  NaNO3  20°C 0.10M U        K1=16.40       1971SEa (87017) 776
********************************************************************************
C14H11O2NF2S           HL                      CAS 51679-49-3  (2928)
N-((3-Difluoromethylthio)phenyl)anthranilic acid;HOOC(C6H4).NH.(C6H4).S.CHF2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  mixed  22°C  90%  U        K1=6.32        1982GKb (87026) 777
Medium: 90% DMF/H2O
********************************************************************************
C14H11O2NF2S           HL                      CAS 51679-50-4  (2929)
N-((4-Difluoromethylthio)phenyl)anthranilic acid;HOOC(C6H4).NH.(C6H4).S.CHF2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  mixed  22°C  90%  U        K1=6.12        1982GKb (87031) 778
Medium: 90% DMF/H2O
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.01M C        K1=8.4    B2=16.20  2001LAa (87905) 779
Medium: 0.01 M HClO4. Method: spectrophotometric titration.
********************************************************************************
C14H17N5O3             HL    Pipemidic acid   CAS 51940-44-4  (2535)
8-Ethyl-5,8-dihydro-5-oxo-2-(1-piperazinyl)pyrido[2,3-d]pyrimidine-6-carboxylic
acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  oth/un 25°C 0.05M U                         2000MPa (88055) 780
                                          K1eff=6.07
Medium: 0.05 M chloroethanoate, pH=5.5. Method: spectrofluorimetry.
For Cinoxacin, K1eff=5.601-Ethyl-3-carboxy-6,7-methylenedioxy-4-cinnolone
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      gl  KNO3   35°C 0.10M U        K1=19.18       1980KHb (88572) 781
--------------------------------------------------------------------------------
Al+++      ISE KNO3   25°C 0.10M U        K1=18.9        1967ABb (88573) 782
                                         K(Al+HL)=3.4
                                         K(AlL+OH)=6.3
--------------------------------------------------------------------------------
Al+++      sp  NaClO4 25°C 0.20M U        K1=18.50       1967BAc (88574) 783
```

By glass electrode: K(AlL+H)=2.29, K(AlL(OH)+H)=7.82

Al+++	ISE KNO3	20°C 0.10M U T H	K1=18.63 K(AlL+H)=2.59	1966MCa (88575)	784

K1=18.8(30 C),19.15(40 C); DH(K1)=-46.0 kJ mol-1, DS=510 J K-1 mol-1

Al+++	dis NaClO4	20°C 0.10M U	B(AlL(OH))=26.61	1963STc (88576)	785

Medium: KClO4

Al+++	vlt KNO3	20°C 0.10M U	K1=17.63 K(AlLOH+H)=7.58 K(AlL+H)=3.93	1954SGa (88577)	786

****

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
Al+++	nmr	oth/un	20°C	0.12M	C		K1=18.50	2002AMb (89008)	787

Medium: 0.02 M Al(NO3)3, pH 2.0. Method: 27Al nmr.

****

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
Al+++	ISE	KNO3	25°C	0.10M	C	M	K(AlL+H)=5.18 K(AlHL+F)=5.3 K(AlL+F)=2.9	1996YHa (89144)	788

Method: Fluoride ISE.

Al+++	gl	KNO3	35°C	0.10M	U		K1=20.66	1980KHb (89145)	789

Al+++	ISE	KNO3	25°C	0.10M	U		K1=18.7 K(Al+HL)=4.3 K(AlL+OH)=6.6	1967ABb (89146)	790

Al+++	ISE	KNO3	20°C	0.10M	U T H		K1=18.4 K(AlL+H)=4.63	1966MCa (89147)	791

K1=18.51(25 C),18.62(30 C),18.80(40 C). At 25 C: DH(K1)=33 kJ mol-1, DS=472

****

C14H24N2O10 EGTA CAS 67-42-5 (349)
Ethyleneglycol-O,O'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.20M	U		K1=13.90 K(AlL+H)=3.97	1967BDb (89837)	792

K(AlLOH+H)=5.20
K(AlL(OH)2+H)=8.42
K1 by spectrophotometry
****
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
---
Al+++ gl KCl 25°C 0.10M C K1=12.5 1993DSa (90079) 793
K(AlL+H)=3.28
****
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
---
Al+++ gl R4N.X 25°C 0.05M U K1=12.9 1999BDb (90345) 794
Medium: Et4NClO4
****
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
---
Al+++ sp oth/un 25°C 0.10M U 1978KIa (90946) 795
B3=11.91
****
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
---
Al+++ kin KNO3 25°C 0.10M C K1=23.3 1996PKa (90952) 796
****
C15H10O7 H5L Quercetin CAS 117-39-5 (5101)
3,5,7-Trihydroxy-2-(3',4'-dihydroxyphenyl)-1-benzopyran-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp non-aq 25°C 100M C 2001ADb (91020) 797
K1eff=-2.34
Medium: MeOH, 0.2 M acetate buffer, pH 5.0. K1eff: Al+HnL=AlL
****
C15H10O10S H5L CAS 141896-20-0 (8182)
2-(3,4-Dihydroxyphenyl)-3.5-dihydroxy-7-(sulphooxy)-4H-1-benzopyran-4-one, Quercetin-7-sulfonic;

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

```
--------------------------------------------------------------------------------
Al+++      sp  non-aq 25°C  100M C                        2001ADb (91028) 798
                                        K1eff=-1.73
Medium: MeOH, 0.2 M acetate buffer, pH 5.0. K1eff: Al+HnL=AlL
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      sp  NaClO4 20°C 0.10M U        K1=5.11        1989KOa (91031) 799
--------------------------------------------------------------------------------
Al+++      sp  NaClO4 20°C 0.10M U                       1976KTb (91032) 800
                                        B(AlH4L)=7.56
                                        B(Al2H2L)=20.9
********************************************************************************
C15H11NO2             H2L                        (430)
2-(2'-Hydroxyphenyl)-8-hydroxyquinoline; HO.C6H4.C9H5N.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  diox/w 25°C  50%  U        K1=19.8   B2=34.70  1974CCb (91056) 801
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      vlt NaClO4 25°C 0.10M U        B2=21.90       1975TBc (91206) 802
--------------------------------------------------------------------------------
Al+++      vlt alc/w  25°C  50%  U        K1=12.86       1973TBa (91207) 803
Medium: 50% EtOH, 0.06 M (H/Na)ClO4
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      sp  oth/un 25°C 0.10M U        K1=4.37        1978KIa (91266) 804
********************************************************************************
C15H11N3O4S           H2L                        (5130)
7-Phenylazo-8-hydroxyquinoline-5-sulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  NaNO3  25°C 0.10M C        K1=7.53        1995SOa (91334) 805
********************************************************************************
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
Al+++	sp	oth/un	RT	dil	C			1985IBa (91340)	806
							K1eff=6.73		
							B2eff=11.20		
							B3eff=15.64		

Medium: Britton and Robinson buffer, pH 6.6

****

C15H11O3Cl H2L CAS 654637-45-3 (9237)
7,8-Dihydroxyflavylium chloride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	none	25°C	0.0	C		K1=9.11	2003MMa (91401)	807

****

C15H11O5Cl H4L Luteolinidin CAS 1154-78-5 (9239)
2-(3,4-Dihydroxyphenyl)-5,7-dihydroxy-1-benzopyrilium chloride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	none	25°C	0.0	C		K1=6.81	2003MMa (91403)	808

****

C15H12O2 HL CAS 1214-47-7 (951)
3-Phenyl-1-(2'-hydroxyphenyl)-2-propen-1-one, 2'-hydroxychalkone;
C6H5.CH:CH.CO.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	diox/w	30°C	60%	U		K1=11.35 B2=21.05	1975KKc (91576)	809

****

C15H14O6 H4L Catechin CAS 154-23-4 (2737)
3,3',4',5,7-Pentahydroxyflavone; (HO)3(O)C9H6O.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C			2002IIb (91815)	810
							K(Al+H4L=AlH2L+2H)=-5.57		
							K(AlH2L=AlH2L(OH)+H)=-5.76		
							K(AlH2L+H4L=Al(H2L)2+2H)=-8.3		

For (-)-epicatechin, K(Al+H4L=AlH2L+2H)=-5.75, K(AlH2L=AlH2L(OH)+H)=-6.0, K(AlH2L+H4L=Al(H2L)2+2H)=-8.2.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.50M	C		K1=18.3	1985CDa (91816)	811
							K(Al+HL)=12.4		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C			1985KPa (91817)	812
							K(Al+H2L)=17.10		
							K(AlH2L+H2L)=13.89		
							K(Al(H2L)2+H2L)=9.93		
							K(Al(OH)H2L+H)=5.98		

K(Al(H2L)2=Al(OH)(H2L)2+H)=-8.22. For the epicatechin dimer H8L constants for AlH6L, Al(H6L)2 and Al(OH)H6L given in Austral. J Chem., (1985) 38, 879

****

C15H14O7 H5L CAS 970-73-0 (1796)
Epigallocatechin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C			2002IIb (91819)	813
							K(Al+H5L=AlH3L+2H)=-5.75		
							K(AlH3L=AlH3L(OH)+H)=-5.23		
							K(AlH3L+H5L=Al(H3L)2+2H)=-7.16		

****

C15H15NO2 HL CAS 61-68-7 (2927)
N-(2,3-Dimethylphenyl)anthranilic acid; HOOC(C6H4).NH.(C6H3)(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	mixed	22°C	90%	U		K1=6.56	1982GKb (91829)	814

Medium: 90% DMF/H2O

****

C16H11N2O5ClS HL (7535)
2-[(2-Hydroxy-5-chlorophenyl)azo]-1-hydroxynaphthalene-4-sulfonic acid;HO.C6H3ClN=NC10H5N(OH)HSO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	kin	KNO3	25°C	0.10M	C		K1=15.26	1996PKa (92769)	815

****

C16H11N3O6S H3L (1047)
7-(4-Carboxyphenylazo)-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	NaCl	25°C	0.10M	U		K1=9.86 B2=16.84	1984OFa (92850)	816

****

C16H11N3O7S H3L CAS 116946-37-3 (1598)
7-Hydroxy-((4-carboxyphenyl)azo)-8-hydroxy-5-quinolinesulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	22°C	0.10M	C		K1=7.49	1988BEa (92852)	817

****

C16H11N3O10S2 H4L Chromotrope 2B CAS 548-80-1 (896)
2-((4-Nitrophenyl)azo)chromotropic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	NaClO4	25°C	0.10M	U			1982PRa (92861)	818
							K(Al+H2L=AlL+2H)=-4.70		

****

C16H12N2O5S H3L SolochromeVio R CAS 94205-83-1 (4093)
1-(2'-Hydroxy-5'-sulfophenylazo)-2-naphthol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	25°C	0.0	U		K1=18.4 B2=31.6	1962CRa (93021)	819

****

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
Al+++	gl	NaClO4	25°C	0.10M	U		K1=16.70 B2=25.70	1975MPa (93059)	820
Al+++	gl	KCl	20°C	0.10M	U		K1=18.41	1964PCa (93060)	821

****

C16H12N2O11S3 H5L CAS 548-81-2 (5180)
2-(4'-Sulfophenylazo)chromotropic acid,
2-(4-sulfophenylazo)-1,8-dihydroxyaphthalene-3,6-diHSO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.10M	U		K1=10.00 B2=13.80	1975MPa (93091)	822

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	25°C	?	U			1968GSe (93184)	823
							K(?)=10.5		

****

C16H13N3O7S H4L (1596)
8-Hydroxy-7-((2-hydroxy-5-carboxyphenyl)azo)-5-quinoline sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	NaCl	22°C	0.10M	C		K1=14.15	1988BEa (93287)	824

****

C16H13O3Cl H2L CAS 125653-94-3 (9238)
7,8-Dihydroxy-4-methylflavylium chloride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	none	25°C	0.0	C		K1=8.30	2003MMa (93393)	825

****

C16H13O5Cl H3L (261)
3',4',7-Trihydroxy-3-methoxyflavylium chloride; (HO)2C6H3.C9H4O(OH)(OCH3)Cl

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      sp  none   25°C 0.00  U                        1997EFa (93396) 826
                                    K(Al+H2L=AlL+2H)=-4.04
-------------------------------------------------------------------------
Al+++      sp  NaCl   25°C 0.50M U                        1994DEa (93397) 827
                                    K(Al+HL=AlL+H)=0.36
                                    K(Al+H2L=AlL+2H)=-4.04
For the hemiacetal, K(Al+H2L=AlL+2H)=-6.39.
*************************************************************************
C16H14N2O              HL                    CAS 38214-71-0  (8453)
3-(2-Hydroxy-5-methylphenyl)-5-phenylpyrazole;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  diox/w 27°C  70%  C        K1=10.75  B2=21.05  1994SNa (93418) 828
                                    K3=9.50
Medium: 70% v/v dioxane/H2O, 0.10 M NaClO4.
*************************************************************************
C16H16N2O2             HL                     (5159)
4-Hydroxyphenacylidene-4-dimethylaminoaniline; HOC6H4COCH:NC6H4N(CH3)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      sp  alc/w  28°C 100%  U                        1970GGa (93660) 829
                                    K(Al+2HL)=8.59
Medium: MeOH
*************************************************************************
C16H18N2O5S            HL    Penicillin V     CAS 87-08-1  (943)
Phenoxymethylpenicillinic acid, 4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic
acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M M T H    K1=8.20   B2=13.20  1983SBc (93814) 830
Also data for 35 C. DH(B2)=1.1 kJ mol-1, DS(B2)=253 J K-1 mol-1.
*************************************************************************
C16H18N3O3F            HL    Norfloxacin      CAS 70458-96-7  (7141)
1-Ethyl-6-fluoro-1,4-dihydro-4-oxo-7[1-piperazinyl]-3-quinoline carboxylic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  oth/un 25°C 0.10M C        K1=8.83          1995DJa (93827) 831
                                    B(AlHL)=14.60
                                    K(Al+L=AlL(OH)3+3H)=-14.85
Medium: LiCl
*************************************************************************
C16H18O9               HL    Chlorogenic acd  CAS 327-97-9  (2844)
3-(3',4'-Dihydroxycinnamoyl)-1,3,4,5-tetrahydroxycyclohexane carboxylic acid;
-------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C                          2002AOa (93898) 832
                                      B(-2,1,1)=-3.91
                                      B(-3,1,1)=-8.17
                                      B(-4,1,1)=-13.79
                                      B(-6,1,2)=-19.28
B(-7,1,2)=-27.65, B(-9,1,3)=-34.01.
B(p,q,r): pH+qAl+rH3L=HpAlq(H3L)r
*************************************************************************
C16H24O14            H4L                    CAS 61696-54-6  (6104)
1,4,7,10,13,16-Hexaoxacyclooctadeca-2,3,11,12-tetracarboxylic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  R4N.X  25°C 0.05M C    M   K1=9.0          1998TSb (94490) 833
                                      B(AlHL)=13.1
                                      B(AlH2L)=17.3
Medium: 0.05 M Et4NClO4.  Also ternary complexes, MAlH-nL, where M=Na, K,
Cs, Ca, Sr, Ba.
*************************************************************************
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
-------------------------------------------------------------------------
Al+++      gl  NaNO3  25°C 0.20M C        K1=17.0         1995KKa (94876) 834
*************************************************************************
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
-------------------------------------------------------------------------
Al+++      gl  R4N.X  25°C 0.05M U        K1=11.3         1999BDb (95175) 835
Medium: Et4NClO4
*************************************************************************
C17H14N2O7S          H4L                      (1597)
4-Hydroxy-((2-hydroxy-5-carboxyphenyl)azo)-naphthalenesulfonic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  NaCl   22°C 0.10M C        K1=15.27        1988BEa (95936) 836
*************************************************************************
C17H16N2O2            HL                    CAS 65840-98-4  (8454)
3-(2-Hydroxy-5-methyphenyl)-5-(4-methoxyphenyl)pyrazole;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Al+++      gl  diox/w 27°C  70%  C        K1=10.55  B2=20.80  1994SNa (96027) 837
                                      K3=7.45
```

Medium: 70% v/v dioxane/H2O, 0.10 M NaClO4.

****

C17H18N3O3F HL Ciprofloxacin CAS 189257-90-7 (7142)
1-Cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-7[1-piperazinyl]-3-quinoline carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.20M	C		B(AlH2L2)=29.33 B(AlH2L3)=35.8 B(AlH3L3)=43.26	1996TBc (96223)	838

****

C18H20N2O6 H4L CAS 10328-28-6 (3501)
Ethylenedinitrilo-N,N'-bis(2'-hydroxyphenyl)-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C		K1=25.78 K(AlL+H)=3.73	1993MMa (97393)	839

****

C18H20N2O6 H4L EHPG CAS 10328-28-6 (429)
N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (HOOCCH(C6H4OH)NHCH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	25°C	0.10M	C		K1eff=9.38	2003YFc (97420)	840

Method: UV difference spectrophotometry. Medium: 0.10 M HEPES, pH 7.4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.12M	C		K1=24.48	1981RMb (97421)	841

****

C18H20N3O4F HL Ofloxacin CAS 82419-36-1 (7789)
a-Fluoro-3-methyl-10-(4-methyl-1-piperazinyl)-7-oxo-2,3-dihydro-7H-pyrido-1,4-benzoxazine-6-COOH;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KCl	25°C	0.10M	C	I	K1=10.37 B(AlHL)=16.40	2001DJa (97453)	842

Medium: 0.10 M LiCl, 0.001 M Triton. In 0.10 M LiCl, 0.005 M CTAB, K1=11.56, B(Al2H-2L)=3.6.

****

C18H22N4O4 H2L CAS 2444-14-6 (3502)
N,N'-Bis(2-pyridylmethyl)diaminoethane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.16M	C		K1=10.85 K(Al+L=AlL(OH)+H)=6.37	1997CRa (97539)	843

K(AlL(OH)+H=AlL)=4.48

****

C18H26N2O6P2 H4L CAS 53431-86-0 (5266)
Ethylenebis(imino(2-hydroxyphenyl)methylene(methyl)phosphinic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	EMF	oth/un	?	?	U		K1=20.0 K(Al+HL)=15.36	1970DMc (97673)	844

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	R4N.X	25°C	0.10M	C		K1=20.23 K(AlL+H)=5.97 K(AlL+Al)=9.55 K(Al2L(OH)+H)=4.68 K(Al2L(OH)2+2H)=9.87	1998ACc (98007)	845

Medium: N(CH3)4NO3.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	ISE	KNO3	25°C	0.10M	C	M	K(AlL+H)=5.94	1996YHa (98008)	846

Method: Fluoride ISE.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	KNO3	35°C	0.10M	U		K1=18.74	1980KHb (98009)	847
Al+++	gl	KNO3	25°C	0.10M	U		K1=19.7 K(AlL+H)=5.85 K(Al2L+2OH)=15.9	1970HAa (98010)	848

By ion-selective electrode (Hg): B(Al2L)=28.6. By redox: B(Al2L)=28.9

****

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
Al+++	gl	NaNO3	25°C	0.20M	C		K1=16.3	1995KKa (98188)	849

****

C18H36N2O6 L Cryptand 2,2,2 CAS 23978-09-8 (514)
1,10-Diaza-4,7,13,16,21,24-hexaoxabicyclo[8.8.8]hexacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	R4N.X	25°C	0.05M	U		K1=10.6	1999BDb (98513)	850

Medium: Et4NClO4

****

C19H12O8S H4L Pyrogallol red CAS 85531-30-2 (638)
Pyrogallolsulfonephthalein;

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  oth/un 25°C    ?  U                         1968GSa (98997) 851
                                          K(?)=5.0
********************************************************************************
C19H12O9Br2S          H6L    Bromo Pyrog.Red  CAS 16574-43-9  (706)
5',5"-Dibromopyrogallolsulfonephthalein;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  oth/un 20°C 0.05M U                         1970BLb (99010) 852
                                        K(Al+H4L)=5.03
********************************************************************************
C19H13N3O7S2          H3L    Naphthylazoxine  CAS 56932-43-5  (276)
8-Hydroxy-7-(6'-sulfo-2'-naphthylazo)-quinoline-5-sulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  NaCl   25°C 0.10M U        K1=7.88          1982HOa (99056) 853
********************************************************************************
C19H13N3O11S3         H5L                    CAS 37469-13-9  (1883)
8-Hydroxy-7((8'-hydroxy-3',6'-disulfo-1'-naphthyl)azo)quinole-5-sulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      sp  NaCl   25°C 0.10M U        K1=16.03         1983IOa (99058) 854
********************************************************************************
C19H14O7S             H4L    Pyrocatechol Vi  CAS 369596-29-2  (709)
Pyrocatechol Violet,
3-[3,4-Dihydroxyphenyl-3-hydroxy-4-oxo-2,5-cyclohexadien-1-ylidenemethyl-b.;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C                         1995SSa (99101) 855
                                        B(-1,1,1)=-0.23
                                        B(-2,1,2)=-1.02
                                        B(-3,1,3)=-2.57
                                        B(-4,1,2)=-10.21
B(p,q,r): pH+qAl+r(H3L-). B(-5,1,3)=-13.03, B(-6,1,3)=-21.10, B(-7,1,3)=
-30.46, B(-8,1,3)=-40.75, B(-9,1,3)=-52.0, B(-6,3,3)=-5.07, B(-16,6,6)=-23.2
--------------------------------------------------------------------------------
Al+++      sp  KCl    25°C 0.50M U                         1974CMc (99102) 856
                                        K(Al+H3L=AlH2L+H)=0.12
                                        K(AlH2L+H3L=AlH3L2+2H)=-6.10
                                        K(AlH3L2+H2L=AlH4L3+H)=-1.87
                                        K(2Al+H3L=Al2HL+2H)=-0.23
K(Al+H2L)=7.9, K(Al+H2L+HL)=19.4, K(Al+H2L+2HL)=27.3, K(2Al+HL)=17.3
Ligand: Pyrocatechol sulfophthalein
--------------------------------------------------------------------------------
```

```
Al+++      gl  KCl    25°C 0.20M U        K1=25.12  B2=47.39  1970GOa (99103) 857
                                          K3=20.74
**************************************************************************
C19H15N                 L                        (6870)
(4-Phenyl-3-pyridyl)styrene;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Al+++      sp  non-aq 25°C 100%  U    M                 1993IWa (99120) 858
                                       K(AlACl+L)=-2.02 (L is trans)
                                       K(AlACl+L)=-2.52 (L is cis)
Medium:Dichloroethane. H2A:Tetraphenylporphyrin
**************************************************************************
C19H15NO8            H4L    Alizarin Comp.   CAS 3952-78-1  (671)
(3,4-Dihydroxy-2-anthraquinonyl-methyl)iminodiethanoic acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Al+++      sp  diox/w       20%  U                      1973INa (99129) 859
                                       K(Al+HL)=14.3
                                       B(Al2L)=25.3
Medium: 20% dioxan, 0.1 M
**************************************************************************
C19H19N7O6           H3L    Folic acid       CAS 75708-92-8  (194)
Pteroylglutamic acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Al+++      gl  KNO3   30°C 0.10M U  I     K1=4.65   B2=8.85   1970NDa (99283) 860
                                          K3=4.10
I=0: K1=5.80, K2=4.70, K3=4.65. I=0.01: K1=5.25, K2=4.55, K3=4.50.
I=0.05: K1=4.80, K2=4.28, K3=4.15
**************************************************************************
C19H39N7O6           H3L    TETMAHA            (7468)
1,4,8,11-Tetraazacyclotetradecane-N,N',N"-tris(N-methylacetohydroxamic acid);
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.10M C        K1=21.02       1999GGa (99501) 861
                                       B(AlHL)=30.72
                                       B(AlH2L)=35.60
                                       B(AlH3L)=40.71
                                       B(AlH4L)=44.17
**************************************************************************
C20H11NO9S2          H3L                    CAS 65501-73-7  (8982)
6-Hydroxy-5-dibenzo[a,j]phenoxazone-8,11-disulfonic acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Al+++      sp  KCl     RT   1.0M C                      1980NLa (99533) 862
```

K(Al+HL=AlL+H)=-0.39
At pH 5-6.5, K1eff=4.77. Data for solutions with Septonex and cetylpyridinium surfactants

****

C20H13N3O7S H3L Eriochrome Bl T CAS 1787-61-7 (997)
1-(1-Hydroxy-2-naphthylazo)-6-nitro-2-naphthol-4-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	20°C	0.10M	U			1980PKa (99559)	863
							K(Al+2HL)=12.51		

Medium: Na2SO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.10M	U		K1=9.56 B2=13.66	1975MPa (99560)	864

****

C20H14N2O5S H3L Solochrome 6B CAS 3564-14-5 (3507)
1-(1-Hydroxy-2-naphthylazo)-2-naphthol-4-sulfonic acid, Mordant Black3, Eriochrome blue-black B;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.10M	U		K1=11.58 B2=20.97	1975MPa (99644)	865

****

C20H14N2O5S H3L EriochrBluBlk R CAS 2538-85-4 (3508)
3-Hydroxy-4-(2-hydroxy-1-naphthylazo)naphthalene-1-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	25°C	0.10M	U			1967NNc (99686)	866
							K(Al+2HL)=41.97		
							K(AlOH+2HL)=40.62		

****

C20H24N2O6 H4L HBED CAS 3625-89-6 (2208)
N,N'-Di-(2-hydroxybenzyl)-diaminoethane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	25°C	0.10M	C			2003YFc (99987)	867
							K1eff=8.88		

Method: UV difference spectrophotometry. Medium: 0.10 M HEPES, pH 7.4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaCl	25°C	0.12M	C		K1=24.78	1981RMb (99988)	868

****

C20H35N5O10 H5L (6545)
1,4,7,10,13-Pentaazacyclopentadecane-N,N',N",N"',N""-pentaethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaNO3	25°C	0.20M	C		K1=16.1	1995KKa (100531)	869

****

C21H21O12 H5L CAS 50986-17-9 (7770)
3-O-beta-D-Glucopyranosyldelphinidin ion;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp none 25°C 0.00 U 1997EFa (101191) 870
K(Al+H2L=AlL+2H)=-3.53
****
C21H22O10 L G-Rubrofusarin CAS 63174-98-1 (7067)
2-Methyl-5,6-dihydroxy-6-O-B-D-galactosyl-8-methoxy-naphtho-pyrone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp NaClO4 25°C 1.00M C K1=8.91 1995PDa (101213) 871
****
C22H14O9 H5L CAS 4431-00-9 (3513)
Aurintricarboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp oth/un ? ? U K1=16.6 1972PKa (101491) 872
****
C22H18N4O14As2S2 H8L Arsenazo III CAS 1668-00-4 (1148)
2,7-Bis(2'-arsonophenylazo)chromotropic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp oth/un 25°C 0.10M U 1975MIa (101609) 873
K(Al+H4L=AlH2L+2H)=-1.17
K(AlOH+H5L=Al(OH)H3L+2H)=0.47
****
C22H18O11 H8L CAS 989-51-5 (2270)
Epigallocatechin gallate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.10M C 2002IIb (101680) 874
K(Al+H8L=AlH6L+2H)=-4.47
K(AlH6L=AlH5L(OH)+H)=-4.74
****
C22H23N2O8Cl H2L Aureomycin CAS 56235-18-8 (3515)
Chlorotetracycline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl oth/un 20°C 0.01M U K1=7.2 1956ARd (101758) 875
****
C22H24N2O8 H2L Tetracycline CAS 60-54-8 (2201)
Tetracycline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaNO3	25°C	0.10M	C		K1=12.5	1992GAa (101807)	876
Al+++	gl	oth/un	20°C	0.01M	U		K1=7.4 B2=13.80 K3=5.4	1956ARd (101808)	877

****

C22H24N2O9 H2L Oxotetracycline CAS 79-57-2 (2202)
Oxytetracycline, 5-Hydroxy-tetracycline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	oth/un	20°C	0.01M	U		K1=7.0	1956ARd (101881)	878

****

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
Al+++	gl	KNO3	25°C	0.10M	C		K1=20.35 B(AlHL)=25.37 B(AlH2L)=27.71 B(AlH3L)=30.44 B(Al2L3)=60.18	2004SGc (102190)	879

B(Al2HL3)=66.21, B(Al2H2L3)=71.72, B(Al2H3L3)=76.46, B(Al2H-2L2)=32.05

****

C23H16O9Cl2S H4L Chrome azurol S CAS 1667-99-8 (711)
Chromazurol S;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	KCl	25°C	0.10M	C	I	K(AlL+HL=AlL+H)=2.01 K(3Al+2HL=Al3L2+2H)=12.29 K(2Al+2HL=Al2HL2+H)=12.92	1995HPa (102539)	880

At I=0.60M (KCl): K(Al+HL=AlL+H)=1.80; K(3Al+2HL=Al3L2+2H)=11.99
K(4Al+2HL=Al4H-2L2+4H)=7.45

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	?	?	U		B2=12.85 K(Al+2HL)=6.82	1969TKb (102540)	881
Al+++	sp	KCl	30°C	0.20M	U		K1=4.32	1963SDh (102541)	882

****

C23H18O9S H2L ECR (7200)
3''-Sulfo-3,3'-dimethyl-4-hydroxyfuchson-5,5'-dicarboxylic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	KCl	25°C	0.10M	C		B(Al-HL)=1.75	1996HKa (102619)	883

B(Al3-H2L2)=13.44
B(Al4-H3L5)=29.07
B(Al4-H4L5)=25.30
B(Al1-HL) determined by spectrophotometry, the other values by potentiometry
B(Al4-H5L5)=20.67 species formed at higher alkali addition rate.
****
C23H18O9S H4L Eriochrome cyan CAS 3564-18-9 (433)
4'-Hydroxy-3,3'-dimethyl-2''-sulfofuchsone-5,5'-dicarboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp oth/un 25°C 0.10M U K1=13.66 1975EPa (102625) 884
B(AlHL)=18.25
B(AlH2L)=22.29

Al+++ sp R4N.X 25°C 0.10M U 1973NNb (102626) 885
K(Al+H2L=AlHL+H)=1.9
K(AlHL+2HL)=8.1
Medium: (Na,NH4)Cl
****
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
---
Al+++ gl NaCl 25°C 0.16M C K1=22.8 1997COa (103014) 886
****
C24H42N6O12 H6L (6546)
1,4,7,10,13,16-Hexaazacyclooctadecane-N,N',N",N"',N"",N""'-hexaethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaNO3 25°C 0.20M C K1=22.09 1995KKa (103370) 887
****
C25H20O9 H5L CAS 2947-64-0 (4166)
4',3''-Dihydroxy-3,3',4''-trimethylfuchsone-5,5',5''-tricarboxylic acid, Chromoxane violet R

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp oth/un ? 0.10M U K1=10.42 1967LMf (103603) 888
****
C25H48N6O8 H3L Desferrioxamine CAS 70-51-9 (2488)
Desferrioxamine B; NH2.((CH2)5.NOH.CO.C2H4.CO.NH)2.(CH2)5.NOH.CO.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KCl 25°C 0.20M C K1=23.9 2000FEc (103800) 889
B(AlHL)=33.8
B(AlH2L)=36.6

```
                                        K(Al+H2L)=16.3
                                        K(Al+HL)=23.0
*K(AlH2L)=-2.8, *K(AlHL)=-9.9.
--------------------------------------------------------------------------------
Al+++      gl  KCl    25°C 0.10M C        K1=24.50       1989EHa (103801) 890
                                        K(Al+HL)=24.14
                                        K(AlHL+H)=1.18
                                        K(AlL+H)=9.43
********************************************************************************
C26H25NO9S            H4L    Semi-Xylenol O     (426)
3-(N,N-Di(carboxymethyl)aminomethyl)-2-cresolsulfonephthalein;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  oth/un 25°C 0.10M U        K1=16.7        1979MUa (103942) 891
                                        K(Al+HL)=9.1
                                        K(AlL+H)=3.2
                                        K(Al(OH)L+H)=7.2
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      gl  NaCl   25°C 0.16M C        K1=22.5        1997COa (104061) 892
********************************************************************************
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
--------------------------------------------------------------------------------
Al+++      gl  R4N.X  25°C 0.10M C        K1=14.59       1998ACc (104304) 893
                                        K(AlL+H)=4.40
                                        K(AlL(OH)+H)=7.53
                                        K(AlL+Al)=5.58
                                        K(Al2L(OH)+H)=3.16
Medium: N(CH3)4NO3. K(Al2L(OH)2+2H)=6.92.
********************************************************************************
C27H29NO11              L    Adriamycin       CAS 25316-40-9  (2407)
Doxorubicin;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Al+++      gl  KNO3   25°C 0.05M C                        1993PFa (104452) 894
                                        B(AlHL)=16.70
                                        B(AlH-1L)=7.45
                                        B(AlH-2L)=-0.46
********************************************************************************
C27H30N4O18S3         H9L    TRENCAMS         CAS 252906-93-7  (7599)
3,3',3"-[Nitrilotris(2,1-ethanediyliminocarbonyl)]tris(4,5-dihydroxybenzenesulfonic
```

acid);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl NaClO4 25°C 0.10M C K1=39.97 2002BBd (104479) 895
B(AlHL)=46.27
B(AlH3L)=54.79
K1 by spectrophotometry using competitive reaction with edta, pH 7.2.
****
C27H30O16 H4L Rutin CAS 153-18-4 (4169)
3,3',4',5,7-Pentahydroxyflavone-3-beta-rutinoside;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp non-aq 25°C 100M C 2001ADb (104505) 896
K1eff=-1.92
Medium: MeOH, 0.2 M acetate buffer, pH 5.95. K1eff: Al+HnL=AlL
****
C27H31O16Cl H3L Cyanin CAS 2611-67-8 (9240)
2-(3,4-Dihydroxyphenyl)-3,5-bis(beta-D-glucopyranosyloxy)-7-hydroxy-1-benzopyrilium
chloride;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp none 25°C 0.0 C K1=6.74 2003MMa (104512) 897
****
C27H44O L Vitamin D3 CAS 67-97-0 (6103)
7-Dehydrocholesterol, Cholecalciferol

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl alc/w 25°C 70% C K1=12.4 B2=24.40 2003MYc (104613) 898
Medium: 70% v/v EtOH/H2O, 0.10 M KNO3.
****
C30H27N3O15 H6L Enterobactin CAS 28384-96-5 (2259)
Enterobactin; cyclo-((OH)C6H3(OH).CO.NH.CH.CO.CH2)3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ sp KCl 25°C 0.10M C 1991LRa (105189) 899
K(AlL+H)=5.15
K(AlHL+H)=3.4
K(AlH3L+H)=2.6
****
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
---
Al+++ nmr NaCl 25°C 0.16M C 1996LRc (105321) 900

K(Al+H3L)=0.93
K(Al+2H3L)=3.45
Method: 27Al 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'-dimethylfuchsone-2"-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl KNO3 25°C 0.10M C M K1=18.18 B2=23.40 1998GBa (105450) 901
K(AlL+H)=7.45
K(AlHL+H)=5.14
K(AlL2+2Mg)=4.03
K(AlL2+2Ba)=1.12
K(AlL2+Ba+Mg)=2.79

Al+++ gl NaClO4 25°C 0.10M U B2=27.0 1981MYa (105451) 902
K(Al+HL)=16.3
K(Al(OH)HL+H=AlHL)=5.8
K*(Al2L)=13.4
K*(Al2L): K((Al(OH))2L+2H=Al2L+2H2O

Al+++ sp NaClO4 20°C 0.10M U 1969NNb (105452) 903
K(2Al+H3L)=13.64
K(Al+H2L+H3L)=11.79
****
C32H37NO9S H4L SemiMeThymolBlu (427)
3-(N,N-Di(carboxymethyl)-aminomethyl)thymolsulfonephthalein;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Al+++ gl oth/un 25°C 0.10M U K1=17.9 1979MUa (105663) 904
K(Al+HL)=9.3
K(AlL+H)=3.5
K(Al(OH)L+H)=7.6
****
C36H33N7O15S3 H6L O-TRENSOX 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
---
Al+++ sp NaClO4 25°C 0.10M C K1=21.40 2002BBd (106239) 905
Method: spectrophotometry using competitive reaction with edta, pH 7.2.

Al+++ sp NaClO4 25°C 0.01M C 2001LAa (106240) 906
B(AlHL)=24.8
B(Al2HL)=30.4
B(Al3HL)=34.3
Medium: 0.01 M HClO4. 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
Al+++	sp	oth/un	25°C	0.10M	C		K1eff=6.84 K2eff=6.61	1997ASa (106583)	907

Medium: 0.10 M acetate buffer, pH 5.0.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	gl	NaClO4	25°C	0.10M	U		B(AlHL)=29.14 B(Al2L)=26.8	1982MYa (106584)	908

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	NaClO4	22°C	1.0M	U			1967LMg (106585)	909

K(2Al+2H4L=AlH3L+AlH4L+H)=3.88(?),
K(2Al+4H4L=Al(H3L)2+Al(H4L)2+2H)=6.02(?)

****

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
Al+++	gl	oth/un	25°C	0.10M	U		K1=15.29 K(AlH-1L+H)=6.19 K(AlH-2L+H)=8.23 K(AlH-3L+H)=10.02 K(AlL+H)=3.05	1983YMa (106785)	910

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Polymer Fulvic acid (1523)
Fulvic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	oth/un	22°C	?	U	H	K1eff=4.6 (type I site) K2eff=3.5 (type I site)	1993LMd (108176)	911

pH=3.5; method: Synchronous scan fluorescence spectroscopy. Fulvic acid from northern coniferous forest. K=5.0 and 4.2 (type II site); 5.3 (type III)

****

Polymer L (3532)
Human transferrin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Al+++	sp	KNO3	25°C	0.10M	C		Keff(Al+HCO3L)=13.72 Keff(Al+AlHCO3L)=12.72	1994HCa (108204)	912

Keff(Al+L)=7.6
At pH 7.4 in 0.1M N-(2-hydroxyethyl)piperazine-N'-2-ethanesulfonic acid, (HEPES) and 5mM HCO3

Al+++ sp oth/un 25°C 0.10M U 1990HSb (108205) 913
Keff(Al+L)=13.5
Keff(AlL+L)=12.5
Medium: 0.1 M N-(2-Hydroxyethyl)piperazine-N'-ethanesulfonic acid and 5 mM NaHCO3, pH 7.4.

Al+++ sp oth/un 25°C 0.10M U 1987MSc (108206) 914
K1eff=12.9
K1eff=12.3
Medium: 0.1 M Tris buffer, pH 7.4; 0.027 M HCO3-. By competition with the Al-NTA complex.

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EXPLANATORY NOTES

DATA Flags are :-

T Data at other TEMPERATURES
I Data with various BACKGROUNDS
H Data for THERMOCHEMICAL quantities
M Data for TERNARY Complexes

EVALUATION Flags are :-

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

END