

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 3276 experiments for

(no ligands specified)

5 metals : Fe(0), Fe(IV), Fe+, Fe++, Fe+++

(no references specified)

(no experimental details specified)

CO L Carbon monoxide CAS 630-08-0 (551)

Carbon monoxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe(0)	cal	non-aq	25°C	100%	U	HM			1993NBa (2788)	1
Medium:Cyclohexane. K:FeL3A+L=FeL4A, A=PMe3 DH=-171.1 kJ mol ⁻¹ . For A=PEt3 DH=-158.6. Data also for other phosphines										
Fe(0)	cal	non-aq	25°C	100%	U	HM			1993NBa (2789)	2
Medium:Cyclohexane. K:FeL2A2+L=FeL3A2. A=PMe3. DH=-124.7 kJ mol ⁻¹ . For A=1,2-bis(dimethylphosphino)ethane DH=-151.0 Data for other phosphines										
Fe(0)	gl	none	0°C	0.0	U	M			1952HHb (2790)	3
							K(HFeL4+H)=4.44			
							K(FeL4+H)=14.0			
							K(H2FeL4(s)=H2FeL4)=-2.96			
Fe(0)	gl	oth/un	18°C	var	U	M			1949KSa (2791)	4
							K(HFeL4+H)=4.4			
							K(FeL4+H)=13.4			
							K(H2FeL4(s)=H2FeL4)=-2.74			

CH3F3S HL CAS 1493-13-6 (6755)

Trifluoromethanesulfonic acid; CF3SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe(0)	cal	non-aq	25°C	100%	U	HM			1992SZa (17462)	5
Medium: CH2Cl2. DH(Fe(CO)3A+HL=(Fe(CO)3AH)L(ion pair))=-100 kJ mol-1. A=Ph2P(CH2)PPh2. DH values also for many other A ligands										

C6H6		L		Benzene				CAS 71-43-2	(2143)	
Benzene, cyclohexatriene;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe(0)	kin	non-aq	rt	100%	U	M			1993WMa (43166)	6
K(FeA2B+L=FeA2L+B)=0.677										
Medium:Cyclohexane. A:Me2PCH2CH2PMe2. B:C6H12. For L=toluene K=0.52										

HL Hydroxide (57)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe(IV)	sp	NaCl	25°C	0.0	C T H				2001SBd (11316)	7
*K(HFeO4)=-7.227										
Medium: 0.1-2.5 m NaCl containing 0.005 M Na2HPO4/0.001 M borate, pH 9.0.										
Data extrapolated to I = 0.0. Metal ion is Fe(VI). DH(*K)=17.0 kJ mol ⁻¹ .										

C52H46N4O12S4			H4L					(6861)		
5,10,15,20-Tetrakis(2,6-dimethyl-3-sulfonatophenyl)porphyrin;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe(IV)	vlt	NaNO3	?	0.20M	C			*K(FeL)=-5.7 *K(FeL(OH))=-9.0	1991KZa (107475)	8

e- Electron;	HL	Electron	(442)
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+	EMF	none	20°C	0.0	U				1957HCa	(469) 9
							K=-25.4(-740 mV)			
K: 1/3Fe3(CO)12(s)+2e=Fe(-II)(CO)4--										

CO			L		Carbon monoxide	CAS	630-08-0	(551)		
Carbon monoxide;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+	vlt	non-aq	25°C	100%	U	M		1987SKa	(2792) 10
							K(FeP+2L)=6.29 K(FePCl+L)=4.85		
P=tetraphenylporphyrin; Medium: CH ₂ Cl ₂ , 0.1 M Bu ₄ NClO ₄									
Constants determined by cyclic voltammetry									

C ₄ H ₆ N ₂			L			2-Me-Imidazole	CAS 693-98-1	(122)	
2-Methyl-1,3-diazole; C ₃ H ₃ N ₂ .CH ₃									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+	vlt	non-aq	20°C	100%	U				1978KBb (29480)	11
								K(Fe(phthalocyanine)+L)=1.08		
Medium: DMSO										

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+	vlt	non-aq	20°C	100%	U			1978KBb (36623)	12
							K(Fe(phthalocyanine)+L)=1.16		
Medium: DMSO									

C5H8N2		L					CAS 1759-84-0	(173)	
1,2-Dimethylimidazole; C3H2N2(CH3)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+	vlt	non-aq	20°C	100%	U			1978KBb (37624)	13
							K(Fe(phthalocyanine)+L)=0.90		
Medium: DMSO									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+	vlt	non-aq	20°C	100%	U			1978KBb (44698)	14
							K(Fe(phthalocyanine)+L)=1.08		
Medium: DMSO									

e-		HL					Electron	(442)	
Electron;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	vlt	non-aq	20°C	100%	U			1993BGa (470)	15
E(2e + FeC10H10-x(Cl)x+)=1.246, 0.774, 0.315 and 0.168V (vs ferrocenium/ferrocene) for x=10, 5, 2 and 1 respectively. Medium: MeCN, 0.1 M Bu4NBF4.									
Fe++	sol	NaClO4	50°C	1.00M	U			1982GRd (471)	16
							E(Fe+2e=Fe(s))=-425.6 mV		
From the reaction Fe(s)+2Tl(I)=Fe(II)+2Tl(s).									
Fe++	oth	none	50°C	0.00	U T			1972LEc (472)	17
							K=-13.04(-418mV,50C)		
K: Fe++ + 2e=Fe(s). K=-8.41(-353mV,150 C), -6.26(-325mV,250 C), -5.44(-336mV,350 C). Method: combination of thermodynamic data									
Fe++	oth	none	50°C	0.00	U T			1972LEc (473)	18
							K=16.00(513mV,50 C)		
K: HFeO2- +3H + 2e=Fe(s)+2H2O. K=14.20(596mV,150 C), 12.99(674mV,250 C), 11.99(741mV,350 C). Method: combination of thermodynamic data									
Fe++	oth	none	50°C	0.00	U T			1972LEc (474)	19
							K=-0.97(-31mV,50 C)		

K:Fe(OH)2(s)+2H + 2e=Fe(s)+2H2O. K=0.48(20mV,150 C), 0.92(48mV,250 C), 0.79 (49mV,350 C). Method: combination of thermodynamic data

Fe++ cal none 25°C 0.00 U H 1970IWa (475) 20
DH(Fe++ + Fe(CN)6--- = Turnbull's blue)=-63.6 kJ mol-1. (Fe+++ + Fe(CN)6---- = Prussian blue)=2.9

Fe++ oth none 25°C 0.0 M H 1968LCd (476) 21
K(Fe+2e=Fe(s))=-15.99(-473 mV)
DH=92.3 kJ mol-1

Fe++ cal none 25°C 0.0 M H 1968SCd (477) 22
DH(2Fe + H2O2 + 2H = 2Fe+++ + 2H2O) = -291.8 KJ mol-1

Fe++ oth none 25°C 0.0 U 1966SIa (478) 23
K=33.21 ?

K: Fe3O4 + 8H + 2e = 3Fe + 4H2O. By potential measurements, K=40.77, 1206 mV or 41.58, 1230 mV

Fe++ cal none 25°C 0.0 U H 1960HSb (479) 24
DH(Fe(CN)6+0.5Br2(l)=Fe(III)(CN)6+Br)=-17.6 kJ mol-1

Fe++ EMF none 20°C 0.0 U 1960HUa (480) 25
K(Fe+2e=Fe(s))=-16.06(-467 mV)

Fe++ EMF none 25°C 0.0 U 1932RFa (481) 26
K(Fe+2e=Fe(s))=-14.89(-440.2mV)

Fe++ EMF none 25°C 0.0 U 1932RFa (482) 27
K=-29.6(-973 + 98 mV)

K: Fe(OH)2(s)+2e=Fe(s)+2OH

Fe++ EMF oth/un 30°C 40% U T 1920GGa (483) 28
K=-28.4(-855 mV)

Medium:40% w/w NaOH. K: Fe+2e=Fe(s). At 80 C: K=-24.4(-855 mV)

AsO2- HL Arsenite CAS 14102-45-5 (2616)
Arsenite; As(OH)4- or AsO2-

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

Fe++ kin oth/un 25°C ? U HM 1994LCa (1083) 29
K(FeA+L=FeAL)=-0.05

A=Desulfovibrin. DH(FeA+L)=-50.6 kJ mol-1, DS(FeA+L)=-113 J K-1 mol-1

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

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

Fe++ oth none 25°C 0.0 M 1997SAb (1140) 30
Ks(Fe3(AsO4)2(s)+2H=3Fe+2HAsO4)=-18. Calculated from thermodynamic data.

Fe++ oth oth/un 25°C 0.0 U 1990SAa (1141) 31
*K(Fe3L2(s)+2H=3Fe+2HL)=-11.41
Calculated from thermodynamic data.

Fe++ sp oth/un 25°C 1.0M U 1966W0a (1142) 32
K1eff=0.28 in 1 M H2SO4

AsW11039----- H7L (2468)
alpha-Heteromonoarseno-polytungstate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Fe++ gl NaNO3 25°C 1.00M U K1=3.62 1984C0a (1177) 33

As2W17H2061----- H8L (2469)
alpha-Heteropolydiarseno-polytungstate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Fe++ gl NaNO3 25°C 1.00M U K1=8.20 1984C0a (1187) 34
K1=5.00 (alpha2 isomer)

B04H4- HL Borate CAS 10043-35-3 (991)
Borate; B(OH)4-

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Fe++ kin NaCl 25°C 1.0M C K1=3.2 1989MIb (1306) 35
Medium: 1.0 M NaCl/NaB(OH)4.

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Fe++ sp non-aq 25°C 100% U M 1991STa (1923) 36
K(FeA2B2+L=FeA2BL+B)=-1.0
Medium: MeCN(B). A=dimethylglyoximedifluoroborate

Fe++ cal KNO3 25°C 0.50M U H 1985BPb (1924) 37
B4=-8.6
DH(B4)=47.7 kJ mol-1; TDS(B4)=-1.7 kJ mol-1

Fe++ sol NaCl 25°C 0.50M U M 1980PGa (1925) 38
Kout(FeA3+Br=FeA3Br)=0.62
Kout(FeA3Br+Br=FeA3Br2)=0.42
Kout(FeA3Br2+Br=FeA3Br3)=0.43

A:2,2'-dipyridyl. Medium: 0.5 M NaClO₄/NaCl

Fe++ sp non-aq 25°C 100% U K1=5.5 1970KLb (1926) 39
Medium: MeCN, 0.01 M Bu₄NClO₄

CN- HL Cyanide CAS 74-90-8 (230)
Cyanide;

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

Fe++ sp non-aq 25°C 100% U 1998BEa (2661) 40
K(FeP(dmsO)₂+L=FeP(dmsO)L)=3.6
K(FeP(dmsO)+L=FePL+dmsO)=2.83

Medium: dmsO. FeP: phthalocyaninatoiron(II)

Fe++ kin oth/un 25°C ? U HM 1994LCa (2662) 41
K(FeA+L=FeAL)=-0.59

A=Desulfovibrin. DH(FeA+L)=-48.1 kJ mol⁻¹, DS(FeA+L)=-92.0 J K⁻¹ mol⁻¹

Fe++ sp non-aq 25°C 100% U 1993NYa (2663) 42
K(FeP(S)₂+L=FePSL+S)=3.48
K(FePSL+L=FePL₂+S)=2.76

Medium(S):dimethylsulfoxide. P:phthalocyanine.

Fe++ sp non-aq 25°C 100% U M 1991STa (2664) 43
K(FeA₂B₂+L=FeA₂BL+B) > 5

Medium: MeCN(B). A=dimethylglyoximedifluoroborate

Fe++ EMF oth/un 25°C 0.0 U 1972SPa (2665) 44
B₆=32.5

Solubility also used

Fe++ sp oth/un 0°C var U 1970EJb (2666) 45
K(Fe₂(CN)₁₀+Fe₂L₁₀=2Fe₂L₁₀)=5

Fe++ cal oth/un 25°C 0.0 U H 1965WCa (2667) 46
B₆=35.4

DH(B₆)=-358.5 kJ mol⁻¹. B₆ also given as 36.9 by thermodynamic calculations

Fe++ vlt oth/un 10°C dil U 1964EMa (2668) 47
K(2FeL₅H₂O=Fe₂L₁₀+2H₂O)=2

Fe++ cal oth/un 25°C var U H 1964GHc (2669) 48
DH(B₆)=-308.1 kJ mol⁻¹

Fe++ cal oth/un 25°C ? U H 1961GUa (2670) 49
DH(B₆)=-321.7 kJ mol⁻¹

Fe++ oth none 25°C 0.0 U 1956SMa (2671) 50
B₆=24

Fe++	kin oth/un 20°C	var U	1955ELa (2672)	51
		K6=8.30		

Fe++ cal oth/un ??? ? U H 1951Yaa (2674) 53
DH(B6)=-281.2 kJ mol⁻¹

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	kin non-aq 25°C 100%	U T HM	1994Bgb	(2794)	55
K(FeAB+L)=2.62					

Fe++ sp non-aq 20°C 100% U T HM 1994DJa (2795) 56
Medium: Toluene. K: FeAB+L(g). H2A: (1,4-dibutyldurene)-capped porphyrin.
B: Dicyclohexylimidazole. Data for T=0-30 C. DH=-39.3 kJ mol⁻¹; DS=48.5

Fe++ sp non-aq 20°C 100% U T HM 1994DJa (2796) 57
Medium: Toluene. K: FeAB+L(g). H2A: (1,4-dibutyldurene)-capped porphyrin.
B: 1,2-Dimethylimidazole. T: 0-30 C. DH=-57.3 kJ mol-1; DS=-135.6

Fe++	sp	non-aq	20°C	100%	U	M	1994TLb	(2797)	58
K(FeAB+L)=10.63									

Additional method:kinetics. Medium:Toluene. A:heme model (hybrid model TPP derivative, n=10). B:1,2-Dimethylimidazole. Also models with n=6, 7 and 8.

Fe++	sp	non-aq	20°C	100%	U	M	1993PMa	(2798)	59
							$K(\text{FeACD}+\text{L}=\text{FeACL}+\text{D})=-0.19$		
							$K(\text{FeBCD}+\text{L}=\text{FeBCL}+\text{D})=-1.36$		
							$K(\text{FeADE}+\text{L}=\text{FeAEL}+\text{D})=-0.55$		
							$K(\text{FeBDE}+\text{L}=\text{FeBEL}+\text{D})=-1.48$		

In toluene. A=Tetramesitylporphine, B=Tetraphenylporphine, C=Methylimidazole D=Tosylmethyisocyanide. Data also for other substituted A and B.

Fe++	EMF non-aq 22°C 100% U	1992PMa (2799)	60
K((FeL2A)2=2FeL2A)=-18.40			

Metal: Fe⁺. Medium: MeCN, 0.1 M Bu₄NPF₆. A=C₅H₅. Dimer-monomer equilibrium

Fe++	sp	non-aq	25°C	100%	U		1991KHb	(2800)	61
K(FeP+CO)=6.8									
FeP=5,10,15,20-tetrakis(2,6-di-tert-butylacetoxyphenyl)porphyrinatoiron(II)									

Fe++	oth	non-aq	25°C	100%	U	M	1989UKa	(2801)	62
K(FeAB+L)=1.08									
A=5,15-Diphenyl-10a,20a-bis(nonanediamidodi-o-phenylene)porphyrin									
B=1,2-Dimethylimidazole. Medium: toluene. Data for other similar porphyrins									

Fe++	sp	oth/un	25°C	?	U		1987NHa	(2802)	63
At pH 7.4. Keff(Porphyrinatoiron+L)=5.70, Keff(red blood cell+L)=5.57									

Fe++	sp	non-aq	20°C	100%	U		1985PEb	(2803)	64
K(FeABS+L=FeABL+S)=4.96									
Medium (S): DMSO. A=phthalocyanin. B=Pyridine									

Fe++	kin	mixed	25°C	50%	U		1984TNa	(2804)	65
K(FeAB+L)=4.40									
Medium:50% ethylene glycol/H2O,pH10.A=heme;B=poly(2-methyl-1-vinylimidazole)									

Fe++	sp	non-aq	20°C	100%	U	T M	1981EMa	(2805)	66
K(FeA+CO=Fe(CO)A)=4.013									
A=Phthalocyanin. Temperature range: 20-53.5 C									

Fe++	sp	non-aq	23°C	100%	U	M	1977JRa	(2806)	67
K(X2FeA+L=XFeAL+X)=3.37									
Medium: Toluene. A=Octamethyltetrabenzoporphyrin, X= Piperidine.									
For X=pyridine, K=2.32									

Fe++	sp	non-aq	23°C	100%	U	M	1977JRa	(2807)	68
K(X2FeA+L=XFeAL+X)=2.41									
Medium: Toluene. A=Octamethyltetrabenzoporphyrin, X=1-Methyl-imidazole.									

Fe++	EMF	NaCl04	20°C	1.0M	U		1971GKc	(2808)	69
K(H+Fe(CO)4)=12.68									
K(H+HFe(CO)4)=4.00									

Fe++	con	non-aq	?	100%	U		1971JGa	(2809)	70
K((SiCl3)2Fe(CO)C5H5+H)=2.6									
Medium: MeCN. Method: NMR also used									

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

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

Fe++	oth	none	25°C	0.0	M			2002PGa	(3218) 71
Kso(FeC03)=-10.59									
*Kso(FeC03)=7.56									
Method:evaluation of published solubility data by application of Davies									

equation. K1=5.3, B2=7.1 assumed. FeCO3 is siderite.

Fe++ sol NaCl 25°C 0.10M C K1=5.41 2002SLa (3219) 72
Kso(FeCO3)=-10.22
Ks(FeCO3+2H=Fe+CO2(g))=-7.26

Method: solubility of siderite (FeCO3) in 0.1-5.5 m NaCl at constant
p(CO2). At I=0, K1=6.30, Kso=-10.9.

Fe++ oth oth/un 25°C 0.72M C K1=3.65 B2= 5.19 1995MYa (3220) 73
K(Fe+HCO3)=0.58

By extrapolation of literature data using Pitzer equations.

Fe++ sol NaCl04 25°C 1.00M C K1=4.13 B2=5.73 1992BWa (3221) 74
K(FeL(s)=Fe+L)=-9.45

Solubility study of siderite (FeCO3)suspensions. Constants at I=0 also given

Fe++ oth oth/un 25°C 0.0 C H K1=4.73 1984FCa (3222) 75
K(Fe+HCO3)=2.17

K(Fe+HCO3) calc using electrostatic model. K1 from oxalate correlation.
DH(K1)=-0.3 kJ mol-1, DH(Fe+HCO3)=4.4 (from DS calc by electrostat model)

Fe++ EMF none 25°C 0.0 U K1=<5 1970SSc (3223) 76
Kso=-10.24

Fe++ oth none 50°C 0.0 U T Kso=-11.04 1969HEa (3224) 77

Method: Estimated data. Temp. range 50-300 C,(siderite). Kso=-11.21(60C);
-11.95(100 C); -12.86(150 C); -14.05(200 C); -15.32(250 C); -16.67(300 C)

Fe++ sol none 30°C 0.0 U Kso(FeCO3(s))=-10.50 1935KAa (3225) 78

I=0 corr. From thermodynamic data, 25 C: Kso=-10.68, K(FeCO3(s)+CO2(g)+H2O=
Fe+2HCO3)=-8.19

Fe++ sol none 30°C 0.0 U Kso(FeCO3(s))=-10.46 1918SMa (3226) 79
+Kso=-6.58

I=0 corr. +Kso: FeCO3(s)+H2CO3=Fe+2HCO3

CS3-- H2L CAS 549-08-1 (936)

Trithiocarbonate;

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

Fe++ sp oth/un ? ? U B2=9.3 1957BIa (3466) 80

C6N6Fe---- H4L (2191)

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

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

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Fe++      sol none   25°C 0.00 U      1972SPa (3566) 81
                                Kso=-14.14
*****
Cl-              HL      Chloride      CAS 7647-01-0 (50)
Chloride;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      sol NaCl   250°C 0.10M M TI      K1=1.2   B2=1.6   19940Ha (4825) 82
Constants at I=0. Pyrite and pyrrhotite solubility measurements.
I=0-4 M NaCl and 250-350 C
-----
Fe++      sol NaCl   400°C var C TI      K1=4.6   B2=7.51  1992DSa (4826) 83
I=0.03 to 1.24 M Cl-. 200-450 C, P=300-500 bar. Constants at I=0
-----
Fe++      sol KCl    300°C var U TI      K1=2.02  B2=3.75  1992FHa (4827) 84
I=0.01-2.0 M KCl, 0.5-2.0 kbar, 300-600 C. Constants at I=0
-----
Fe++      sp non-aq  25°C 100% U      M      1991STa (4828) 85
                                K(FeA2B2+L=FeA2BL+B)=1.0
Medium: MeCN(B). A=dimethylglyoximedifluoroborate
-----
Fe++      sp oth/un  25°C var U TI      K1=-0.16      1990HSA (4829) 86
25-200 C, I=0.01 to 3.4 M Cl-. Constants at I=0
-----
Fe++      kin NaCl   25°C 5.0M C      K1=0.08      1989MIb (4830) 87
-----
Fe++      sol NaCl   25°C 0.50M U      M      1980PGa (4831) 88
                                Kout(FeA3+Cl=FeA3Cl)=0.4
A:2,2'-dipyridyl; Medium: 0.5 M NaClO4/NaCl
-----
Fe++      kin non-aq  25°C 100% U      K1=1.3      1973UWa (4832) 89
                                K(FeCl(DMSO)+H)=0.7
Medium: DMSO, 0.2 M HClO4
-----
Fe++      vlt non-aq  99°C 100% U      1971TEb (4833) 90
                                K(FeL2(s)=FeL+L)=-9.5
Medium: SbCl3. method: current-voltage studies
-----
Fe++      sp non-aq  25°C 100% U      K1=5.8      1970KLb (4834) 91
Medium: MeCN, 0.01 M (C4H9)4NClO4
-----
Fe++      kin NaClO4  25°C 1.0M U      K1=0.78      1969WEb (4835) 92
-----
Fe++      sp NaClO4      1.0M U      K1=<-0.3      1968PSd (4836) 93
-----
Fe++      EMF NaClO4  20°C 2.0M U      K1=0.36   B2=0.40  19430La (4837) 94
*****
ClO4-              HL      Perchlorate      CAS 7001-90-3 (287)

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Perchlorate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	dis	oth/un	25°C	0.25M	C	H		1984PSc (6235)	95
Kout(Fe(phen)3+L)=2.73									

Medium: 0.25 M NaF;Also Kout=2.95 in 0.5 M NaF, 3.18 in 0.75 M NaF;
Phen: phenantroline; for 0.25 M Na2SO4 Kout=3.00, for 0.5 M 2.36;

Fe++	con	non-aq	25°C	100%	U	I		1983IMa (6236)	96
K1out(Fe(phen)3+L)=3.95									
K2out(Fe(phen)3L+L)=2.18									

Medium: 50% w/w CCl4/nitrobenz. Data for 0 - 55%

Fe++	sol	NaCl	25°C	0.50M	U	M		1980PGa (6237)	97
Kout(FeA3+L=FeA3L)=1.18									
Kout(FeA3L+L=FeA3L2)=0.89									

A:2,2'-dipyridyl; Medium: 0.5 M NaClO4/NaCl

Fe++	ISE	none	25°C	0.0	U	T		1968HRb (6238)	98
Kso(FeA3L2(s)=FeA3+2L)=-7.65									

A=1,10-phenantroline. Kso=-7.76(15 C), -7.40(35 C). Method: ClO4 ISE

Fe++	ix	oth/un	?	var	U		K1=-0.9?	1960BHc (6239)	99
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F-	HL	Fluoride						CAS 7644-39-3	(201)
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Fluoride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	ISE	R4N.X	25°C	0.05M	U	I		K1=1.45	1983SBa (6866)	100
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Medium: 0.05 M Et4NF. In MeOH, 0.05 Et4NF, K1=3.79

Fe++	ISE	NaClO4	25°C	1.0M	U			K1=0.83	1972BHc (6867)	101
------	-----	--------	------	------	---	--	--	---------	----------------	-----

Gew11039-----	H8L							CAS 37369-86-1	(2466)
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alpha-Heteromonogermanium-polytungstate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	gl	NaNO3	25°C	1.00M	U			K1=6.12	1984COa (7469)	102
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I-	HL	Iodide						CAS 10034-85-2	(20)
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Iodide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	sol	NaCl	25°C	0.50M	U	M		1980PGa (8023)	103
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Kout(FeA3+I=FeA3I)=0.95

Kout(FeA3I+I=FeA3I2)=0.77

A:2,2'-dipyridyl; Medium: 0.5 M NaClO4/NaCl

Fe++ sp non-aq 25°C 100% U K1=4.3 1970KLb (8024) 104
Medium: MeCN, 0.01 M Bu4NClO4

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

Ammonia

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

Fe++ sol none 25°C 0.0 C 1998ZJa (9147) 105
K(Fe(OH)+L)=3.44

Fe++ gl alc/w 25°C 2.0M U I K1=1.82 B2= 3.10 1992MPb (9148) 106
K3=0.87
for 100% H2O K1=1.53
for 100% H2O K2=0.98
for 100% H2O K3=0.56

Medium: 2.0 M NH4NO3 in 50% v/v EtOH in H2O

Fe++ cal oth/un 25°C 2.0M C K1=1.6 B2= 2.60 1992MPc (9149) 107
K3=0.5
K4=0.2

Medium: 2.0 M NH4NO3;

Corresponding DH: -8.1; -7.9; -8.0; -7.5 kJ mol⁻¹

Fe++ gl diox/w 25°C 2.0M U K1=1.85 B2= 3.15 1992MSc (9150) 108
K3=0.89
K1=1.53 (100%H2O)
K2=0.98 (100% H2O)
K3=0.56 (100%H2O)

Medium: NH4NO3 in 50% v/v dioxane/H2O; for 20% K1=1.69; K2=1.16, K3=0.66

For 2 M NH4NO3 in 50%v/v acetone/H2O K1=1.83; K2=1.31; K3=0.85

Fe++ gl R4N.X 25°C 5.00M U K1=1.4 1985MMa (9151) 109

Fe++ sol none 25°C 0.0 U 1953LKa (9152) 110
B4=ca.3.7

I=0 corr.

NH3 L Hydroxylamine; CAS 5470-11-1 (1808)

Hydroxylamine; NH2.OH

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

Fe++ kin oth/un 25°C ? U HM 1994LCa (9263) 111
K(FeA+HL=FeAHL)=1.77

A=Desulfovibrin. DH(FeA+HL)=39.7 kJ mol⁻¹, DS(FeA+HL)=156.9 J K⁻¹ mol⁻¹

NO L Nitric oxide CAS 10102-43-9 (850)

Nitric oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	ISE	NaCl04	25°C	0.50M	C	M	K1=3.06 K(Fe(edta)+L)=6.31 K(Fe(hpdta)+L)=5.0 K(Fe(egta)+L)=3.89 K(Fe(edda)+L)=5.52	2001SFa (9294)	112
------	-----	--------	------	-------	---	---	---	----------------	-----

Method: NO membrane electrode. Medium pH 5.0. K(Fe(edtp)+L)=3.15.
Data for many related complexones.

Fe++	ISE	NaCl04	25°C	0.50M	C	M	K(Fe(dtpa)+L)=6.48 K(Fe(ida)+L)=4.08 K(Fe(mida)+L)=3.98 K(Fe(nta)+L)=6.24	2001SFa (9295)	113
------	-----	--------	------	-------	---	---	--	----------------	-----

Method: NO membrane electrode. Medium pH 5.0. Data for many related complexones.

Fe++	ISE	NaCl04	23°C	0.50M	C	M	K(FeA+L)=3.04 K(FeB+L)=4.04 K(FeC+L)=3.11 K(FeD+L)=4.32	2001SFa (9296)	114
------	-----	--------	------	-------	---	---	--	----------------	-----

Method: NO membrane electrode. Medium pH 5.0. H2A is glutaric acid, H2B is dipicolinic acid, H2C is L-tartaric acid, H3D is citric acid.

Fe++	sp	non-aq	20°C	100%	U		K1=6.041	1987ABa (9297)	115
------	----	--------	------	------	---	--	----------	----------------	-----

Metal = phthalocyanatoiron(II), solvent = DMSO

Fe++	sol	oth/un	25°C	aq	U		K1=2.67	1982LCa (9298)	116
------	-----	--------	------	----	---	--	---------	----------------	-----

Fe++	kin	oth/un	25°C	0.50M	U		K1=2.65	1966KTb (9299)	117
------	-----	--------	------	-------	---	--	---------	----------------	-----

Fe++	nmr	oth/un	25°C	var	U	M	K(Fe2L4(HPO4)2+2HPO4)=0.15	1965MPa (9300)	118
------	-----	--------	------	-----	---	---	----------------------------	----------------	-----

Fe++	oth	oth/un	25°C	0.0	U		Kp(Fe+NO(g))=-0.18	1961TAb (9301)	119
------	-----	--------	------	-----	---	--	--------------------	----------------	-----

Method: Chemical analysis

Fe++	sol	alc/w	25°C	100%	U	T H	Kp(Fe+NO(g))=0.40	1958GLa (9302)	120
------	-----	-------	------	------	---	-----	-------------------	----------------	-----

Medium: EtOH. Kp=1.24(9.4 C), 0.59(21.4 C). DH=-85.4 kJ mol⁻¹

Fe++	sol	oth/un	25°C	0.03M	U	T H	Kp(Fe+NO(g))=-0.18	1924MHa (9303)	121
------	-----	--------	------	-------	---	-----	--------------------	----------------	-----

Medium: Fe(NH4)2(SO4)2. Kp=0.61(0 C), 0.20(13 C); DH=-48 kJ mol⁻¹

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

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       kin oth/un 25°C    ?  U   HM                      1994LCa (9368) 122
                                     K(FeA+L=FeAL)=-1.80
A=Desulfovibrin. DH(FeA+L)=9.2 kJ mol-1, DS(FeA+L)=108.8 J K-1 mol-1
*****
N2H4       L      Hydrazine      CAS 302-01-2 (2117)
Hydrazine; H2N.NH2
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       EMF oth/un 25°C    var  U       K1=3.62   B2=6.47   1972AKb (10080) 123
                                     K3=1.71
*****
```

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

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       kin oth/un 25°C    ?  U   HM                      1994LCa (10207) 124
                                     K(FeA+L=FeAL)=1.49
A=Desulfovibrin. DH(FeA+L)=29.3 kJ mol-1, DS(FeA+L)=107.1 J K-1 mol-1
-----
Fe++       oth none 25°C    0.0  U       K1=0.69      1980GAa (10208) 125
K1 from the plot logK1 vs atomic no. for first transition series
*****
```

OH- HL Hydroxide (57)
Hydroxide;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       oth oth/un 25°C    0.72M C                      1995MYa (11317) 126
                                     *K1=-9.88
                                     *B2=-21.26
```

By extrapolation of literature data using Pitzer equations.

```
-----
Fe++       con none 25°C    0.0  C                      1988B0a (11318) 127
                                     *K1=-9.63
                                     Kso(Fe(OH)2)=-14.62
                                     Ks(Fe(OH)2(s)=FeOH+OH)=-10.31
                                     *Ks(Fe(OH)2+H=Fe(OH))=-3.75
```

Method: solubility of Fe in O2-free H2O.

```
-----
Fe++       sol none 100°C    0.0  C T                      1980TLa (11319) 128
                                     *K1=-8.78
                                     *B2=-17.15
                                     *B3=-28.11
```

Method: solubility of magnetite under H₂. Data for 100-300 C.

Fe++ gl none 25°C 0.0 M T 1978JBb (11320) 129

*K₁=-9.23
K_{so}(Fe(OH)₂)=-14.39

At 1 C: *K₁=-9.75; 40 C: -8.87

Fe++ ix NaCl04 18°C 0.10M U K₁=7.3 B₂=13.3 1975IKa (11321) 130
B₃=16.9

Fe++ oth none 50°C 0.00 U T 1972LEc (11322) 131

*K₁=-7.97
*K_{so}=12.1

*K₁=-4.67, *K_{so}=8.9(150 C). *K₁=-2.79, *K_{so}=7.2(250 C).

*K₁=-1.61, *K_{so}=6.2(350 C). Method: combination of thermodynamic data

Fe++ EMF none 25°C 0.00 U 1971MEa (11323) 132

*K₁=-9.49

Fe++ kin NaCl04 25°C 0.50M U T 1970BSc (11324) 133

K(FeSO₄+H₂O=Fe(OH)SO₄+H)=-1.4

15 C, K=-1.3; 35 C, K=-1.5

Fe++ sp R4N.X ? 2.00M U I 1970ELc (11325) 134

*K₁=-8.30

Medium: (NH₄)₂SO₄. For 2 M NaCl04, *K₁=-8.07. K(FeOH+H₂O=FeO(OH)+2H)=-25.7
at pH=ca.13

Fe++ EMF oth/un 25°C U 1970MEa (11326) 135

*K₁=-9.58

Fe++ sol oth/un 25°C U 1970SBb (11327) 136

*K₁=-9.3

Fe++ gl NaCl04 0°C 0.01M U TI 1968WSe (11328) 137

*K₁=-4.6

*K₁=-3..8(15 C), -3.3(25 C), -2.0?(35 C). By kinetics, 25 C: *B₂=-7.96(I=4),
-6.35(I=1), -5.85(I=0)

Fe++ EMF oth/un 25°C U 1967MPa (11329) 138

*K₁=-9.5

Fe++ kin NaCl04 25°C 1.00M U 1965WSb (11330) 139

*K₁=-3.32 ?

Fe++ gl NaCl04 25°C 0.50M U T 1963BAC (11331) 140

*K₁=-6.74

Medium: 0.5 to 2.2 M NaCl04; *K₁=-6.93(20 C), -6.49(35 C), -6.34(40 C)

Fe++ gl none 20°C 0.0 M 1963DDa (11332) 141

					Kso=-15.82 K(FeL2(s)=FeL+L)=-9.43	
Fe++	gl	NaCl04	25°C	1.00M	U	1963K0b (11333) 142 *K1=-6.51 *B2=-11.5
Fe++	gl	NaCl04	12°C	1.00M	U T	1961BLa (11334) 143 *K1=-8.50 *K1=-8.03(15 C), -7.15(20 C), -6.8(25 C), -5.95?(30 C)
Fe++	gl	NaCl04	25°C	1.0M	U T	1961B0b (11335) 144 *K1=-6.8(?) *K1=-7.15(20 C)
Fe++	gl	oth/un	25°C	dil	U I	1956Gwa (11336) 145 *K1=-7.92 Medium: FeCl2. In 0.5 M KCl *K1=-7.17
Fe++	sol	none	25°C	0.0	U	1956Gwb (11337) 146 K(Fe(OH)2(s)+OH=Fe(OH)3)=-5.08 K(Fe(OH)2(s)+2OH)=-5.54
Fe++	gl	NaCl04	25°C	1.0M	U	1953HEa (11338) 147 *K1=-9.5
Fe++	sol	none	25°C	0.0	U	K1=5.7 1953LKa (11339) 148 Kso(Fe(OH)2)=-15.1 K(Fe(OH)2(s)=FeOH+OH)=-9.4 *K1=-8.3
Fe++	EMF	oth/un	20°C	var	U	1951QUa (11340) 149 Kso(Fe(OH)2)=-14.78
Fe++	EMF	none	18°C	0.0	U	1950AFa (11341) 150 Kso(Fe(OH)2)=-15.02
Fe++	gl	oth/un	20°C	var	U	1950ARa (11342) 151 Kso(Fe(OH)2)=-13.62 K=-17.2 K: K(Fe3(OH)8(s)=2Fe(OH)3(s)+Fe+20H)
Fe++	gl	oth/un	25°C	dil	U	1938OKa (11343) 152 Kso(Fe(OH)2)=-14.01
Fe++	dis	oth/un	20°C	var	U	K1=6.10 1933JEa (11344) 153
Fe++	con	oth/un	25°C	dil	U	1932MUa (11345) 154 Kso=-14.54 (conductivity) Kso=-14.81 (solubility)

K_{so}=-14.67 (colorimetry)

Fe++ con oth/un 25°C dil U 1932RFa (11346) 155
Kso(Fe(OH)₂)=-14.01

Fe++ EMF none 25°C 0.0 U 1932RFa (11347) 156
K_{so}(Fe(OH)₂)=-14.84

Fe^{++} gl none ? 0.0 U 1930ELa (11348) 157
Kso(Fe(OH)_2)=-15.32

Fe++ vlt oth/un ? 1.37M U 1929SCa (11349) 158
Kso(Fe(OH)₂)=-12.15
K(Fe(OH)₂(s)+OH=Fe(OH)₃)=-4.3
B₃=7.85

Fe++ EMF oth/un 17°C var C 1925BRa (11350) 159
Kso(Fe(OH)2)=-20.35

Method: H electrode

Fe++ sol oth/un 25°C dil U B2=9.17 1925WRa (11351) 160
Kso(Fe(OH)2)=-13.50
K(Fe(OH)2(s)=Fe(OH)2)=-4.33

Fe++ EMF oth/un rt var U 1909KRa (11352) 161
Kso(Fe(OH)2)=-13.06

Fe++ oth oth/un 18°C dil U 1908MUa (11353) 162
Kso(Fe(OH)2)=-13.79

method: combination of thermodynamic data

02	L	Oxygen	CAS 7782-44-7 (83)
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Dioxygen, also oxide; 0-- , and superoxide, 02-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Fe++ sp non-aq -45°C 100% C T HM 1998Sse (12618) 163
K(FeA+O2)=-1.08

Medium: CH₂Cl₂. HA is N,N,N',N'-Tetrakis[(1-methyl-4,5-diphenyl-2-imidazolyl)methyl]-1,3-diamino-2-propanol. DH=-55 kJ mol⁻¹, DS=-263.

Fe++	sp	non-aq	0°C	100%	U	T	HM	1994DJa	(12619)	164
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Medium: Toluene. K: FeAB+L(g). H2A: (1,4-dibutyldurene)-capped porphyrin B: 1,2-Dimethylimidazole. T: -50 to 0 C. DH=-54.8 kJ mol⁻¹; DS=-190.4

Fe++ sp non-aq 0°C 100% U T HM 1994DJa (12620) 165

Medium: Toluene. K: FeAB+L(g). H2A: (1,4-dibutyldurene)-capped porphyrin. B: 1,2-Dicyclohexylimidazole. T: -50 to 0 C. DH=-64.0 kJ mol⁻¹; DS=-207.1

Fe++	kin non-aq 20°C 100%	U	M	1994TLb (12621)	166
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Medium:Toluene. A:Heme Model (hybrid model of TPP derivative, n=10)
B:1,2-Dimethylimidazole. Also data for other heme models (n=6, 7 and 8)

$$K(\text{FeBP}+\text{L})=3.26$$
$$K(\text{FeP}+\text{O}_2)=2.80$$
$$K(\text{FeA}+\text{L}=\text{FeAL})=-1.8$$
$$K(\text{FeAB}+\text{L})=-1.43$$

At pH 7.4. $K_{eff}(\text{Porphyrinatoiron}+L)=3.50$, $K_{eff}(\text{red blood cell}+L)=4.83$

$$K(\text{FeAB}+\text{L})=2.79$$

Phosphate;

$$K(\text{Fe}+\text{H}_2\text{L})=0.55$$
$$K(\text{Fe}+2\text{H}_2\text{L})=1.82$$
$$K(\text{Fe} + 2\text{H}_2\text{L} = \text{FeHL} + \text{H}_3\text{L}) = -1.94$$
$$K(\text{Fe} + 3\text{H}_2\text{L} = \text{FeH}_3\text{L}_2 + \text{H}_3\text{L}) = -1.61$$

At $I=0$ (using SIT): $K(\text{Fe}+\text{H}_2\text{L})=1.01$, $K(\text{Fe}+2\text{H}_2\text{L})=2.71$, $K(\text{Fe}+\text{HL})=4.08$

$$K(\text{Fe}+\text{HL}+\text{H}_2\text{L})=4.38$$
$$K(\text{Fe}+\text{H}_2\text{L})=2.7$$
$$K(\text{Fe}+\text{HL})=3.6$$
$$K_{so}(\text{Fe}_3\text{L}_2(\text{H}_2\text{O})_8) = -36.0 (\text{vivianite})$$
$$K(\text{Fe}+\text{HL})=7.34$$

Medium: 0 corr. K=7.03(20 C)

PW11039----- H7L (2467)

alpha-Heteromonophospho-polytungstate;

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

Fe++ gl NaNO3 25°C 1.00M U K1=4.81 1984C0a (13403) 176

P207---- H4L Pyrophosphate CAS 2466-09-3 (198)

Diphosphate; from (HO)2PO.O.PO(OH)2

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

Fe++ vlt oth/un ? var U 1963Rka (13585) 177

K(Fe(H2L)3+Fe=Fe(H2L)2+H2L+Fe)=-12.54

P2W17061----- Polytungstate (2102)

alpha-Heterodiphospho-polytungstate (usually alpha1 isomer)

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

Fe++ gl NaNO3 25°C 1.00M U K1=8.13 1984C0a (13719) 178

K1=5.30 (alpha2 isomer)

P3010----- H5L CAS 10380-08-2 (1001)

Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2

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

Fe++ kin NaClO4 25°C 1.0M U K1=2.54 1968WSf (13857) 179

K(Fe+H2L)=2.38

K(Fe+H3L)=2.12

P309--- H3L CAS 13566-25-1 (235)

Cyclotrimetaphosphate;

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

Fe++ kin NaClO4 25°C 1.0M U TI K1=1.15 1968WSf (13960) 180

K1=1.72(0 C),1.43(10 C); at I=1.8: K1=0.76(35 C)

At I=4: K(Fe+HL)=1.79(0 C),1.02(25 C),0.81(35 C),0.49(45 C)

P6012----- H6L CAS 25268-83-1 (6590)

Dodecaoxohexaphosphate(III); anion of (PO.OH)6

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

Fe++ sp KCl 25°C 0.50M U I K1=5.13 1990NTa (14059) 181

Data also at I=1.0 M KCl: B1=5.11; 1.5 5.06; 2.0 5.07; 2.5 5.09; 3.0 4.97

S-- H2L Sulfide CAS 7783-06-4 (705)
Sulfide;

Medium: methanol. HA is $\text{HS.CH}_2\text{.(OH)CH}_3$.

Method: determination of free S-- by cathodic stripping voltammetry.
Medium: seawater, pH 8.0, S=35. Also data for S=21 and 10.5.

Ligand is S5--. Method: polarography. Also data for 0.55 M NaCl.

Calculated from data at I=0.10 M NaClO₄. $K(\text{FeS(s)}+\text{H}=\text{Fe}+\text{HS})=-3.00$

Method: voltammetry at Hg/HgS electrode. Medium: seawater. Also data for 0.1 and 0.5 strength seawater

Constants at I=0. Pyrite and pyrrhotite solubility measurements.
I=0-4 M NaCl and 250-350 C

Medium: sea water, pH=8. Method: cathodic stripping square wave voltammetry

Method: voltammetry at Hg/HgS electrode. Medium: seawater. Also $K(H+HS)=6.70$

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-----
Fe++      oth none    25°C      0   U                      1991DAa (14359) 191
                                         *Ks(FeS(am))=-2.95
                                         *Ks(mackinawite,FeS)=-3.6
                                         *Ks(greigite,Fe3S4)=-4.4
                                         *Ks(pyrrhotite,FeS)=-5.1
Eval. lit data. *Ks(FeS):FeS(s)+H=Fe+HS. *K(Fe3S4): Fe3S4(s)+3H=3Fe+3HS+S(0)
*Ks(troilite)=-5.25, K(pyrite+H=Fe+HS+S(0))=-16.4. K(H+S=HS)=17.3 assumed
-----
Fe++      oth none      ?      0   U                      1990DKa (14360) 192
                                         *Ks(FeS+H=Fe+HS)=-4.16
                                         *Ks(FeS+HS=FeHS2)=-0.97

From recalculation of literature data.
-----
Fe++      oth none    25°C     0.0   C                      1989DYa (14361) 193
                                         K(Fe+HS=FeS+H)=-0.2
                                         *Kso(FeS)=-7.9
                                         Kso(FeS)=-8.1
Calculated from literature data, based on K(H+S)=17.0.
FeS is troilite.
-----
Fe++      oth none    25°C      0   U                      1988LIa (14362) 194
                                         Kso(FeS)=-21.0
                                         *Kso(FeS)=-3.7
                                         Kso(FeS2,pyrite)=-51.0
                                         *Kso(FeS2,pyrite)=-16.3
Derived from thermodynamic data and K(H+S=HS)=17.3.
Kso(FeS2,marcasite)=-50.3, *Kso(FeS2,marcasite)=-15.6.
-----
Fe++      oth none    25°C      0   U                      1988SBc (14363) 195
                                         Kso(FeS,troilite)=-26.01
Method: recal. from literature data using K(H+S=HS)=18.57 and K(H+HS)=6.99.
-----
Fe++      dis oth/un 25°C  0.69M U                      1985DYa (14364) 196
                                         K(Fe+2H2S=FeHS2+3H)=-10.91
                                         K(Fe+2H2S=Fe(HS)2+2H)=-4.63
-----
Fe++      sol NaCl04 50°C  1.00M U   H                      1982GRd (14365) 197
                                         *Ks(troilite,FeS)=-3.66
                                         *Ks(pyrrhotite,hex)=-3.67
                                         *Ks(pyrrhotite,mono)=-3.65
*Ks: 1/(1-x)Fe(1-x)S(s)+2H=Fe+H2S(g)+x/(1-x)S(s). Hexagonal pyrrhotite:
FeS1.11. Monoclinic pyrrhotite: FeS1.14
-----
Fe++      gl  NaCl04 51°C   1.0M C                      1977HGc (14366) 198
                                         K(FeS(s)+2H=Fe+H2S(g))=3.80
Solid phase is Fe0.88S (monoclinic pyrrhotite).
Reaction is: 1.14Fe0.88S(s)+2H=Fe+H2S(g)+0.14S(s)
-----
Fe++      oth none    25°C     0.0   U                      1964PCa (14367) 199

```

From thermodynamic data. Alternative value 3.90

$$K_{\text{so}}(\text{FeL}) = -17.29$$

From thermodynamic data. $K_{so} = -15.90(100\text{ C})$, $-14.70(200\text{ C})$, $-13.42(400\text{ C})$, $-12.70(600\text{ C})$

$$K_{so}(FeL2) = -30.25$$

From thermodynamic data.

$$K_{\text{so}}(\text{FeL}) = -17.3$$

From thermodynamic data

$$K(\text{FeL}(s) + 2\text{H} = \text{Fe} + \text{H}_2\text{L}(g)) = 4.44$$

At 14 C: $K=3.96$. From thermodynamic data $K=2.99$ (25 C)

$$K_{\text{so}}(\text{FeL}) = -19.42$$

From thermodynamic data

$$K_{\text{so}}(\text{FeL}) = -21.85$$
$$K(\text{FeL}(\text{s}) + 2\text{H} = \text{Fe} + \text{H}_2\text{L}(\text{g})) = 1.4$$
$$K_{\text{so}}(\text{FeL}) = -18.43$$
$$K(\text{FeL}(\text{s}) + 2\text{H} = \text{Fe} + \text{H}_2\text{L}(\text{g})) = 4.54$$

Thiocyanate;

$$K(\text{FeA}_2\text{B}_2 + \text{L} = \text{FeA}_2\text{BL} + \text{B}) = 2.7$$

Medium: MeCN(B). A=dimethylglyoximedifluoroborate

B6=12.3

Medium: dimethylsulphone

$\Delta H(K1) = -36.8 \text{ kJ mol}^{-1}$, $\Delta S = -78.2 \text{ J K}^{-1} \text{ mol}^{-1}$; $K1 = 2.54(18.3 \text{ C})$, $2.19(34.6 \text{ C})$.

By a combination of thermodynamic data; $B[\text{Fe}(\text{CN})_5\text{OH} + \text{L} = \text{Fe}(\text{CN})_5\text{L} + \text{OH}] = -3.04$

Fe++ sp non-aq 25°C 100% U K1=5.5 B2=9.20 1970KLb (14949) 210

Medium: acetonitrile, 0.01 M Bu4NClO4

Fe++ sp oth/un ? var U M 1967BPc (14950) 211

K(FeA2+L)=0.35

K(FeA2+2L)=0.95

Medium: KL. HA=dimethylglyoxime

Fe++ sp NaClO4 25°C 3.0M U T K1=0.81 1967CSa (14951) 212

Medium: 3(Mg,ClO4),1.8 H+. By kinetics: K1=0.85

Fe++ sp none 23°C 0.0 U K1=1.31 1958YKa (14952) 213

Fe++ sp oth/un 25°C var U K1=0.95 B2=0.07 1937MOa (14953) 214

S03-- H2L Sulfite CAS 7782-99-2 (801)

Sulfite;

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

Fe++ kin oth/un 25°C ? U HM 1994LCa (15450) 215

K(FeA+HL=FeAHL)=-1.22

A=Desulfovibrio. DH(FeA+HL)=-33.1 kJ mol-1, DS(FeA+HL)=-41.8 J K-1 mol-1

Fe++ sp oth/un ? var U M 1965MCd (15451) 216

K(Fe(CN)5NO+L)=-1.96

K(Na+Fe(CN)5NO+L)=-0.89

K(K+Fe(CN)5NO+L)=-0.41

K(K+Fe(CN)5NOL)=1.56

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

Sulfate;

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

Fe++ gl NaClO4 25°C 3.0M C I K1=0.60 B2= 0.87 2002CTa (16179) 217

At I=0, extrapolation using SIT: K1=2.1, B2=2.5

Fe++ kin NaCl 25°C 1.0M C K1=1.8 1989MIb (16180) 218

Medium: 1.0 M NaCl/Na2SO4.

Fe++ con none 25°C 0.0 C T H K1=2.39 1988KMb (16181) 219

Data for 10-35 C. DH(K1)=9.72 kJ mol-1, DS(K1)=78.5 J K-1 mol-1.

Fe++ vlt NaClO4 25°C 0.06M U K1=2.72 1972MAd (16182) 220

Medium: HClO4

Fe++ cal none 25°C 0.0 U H K1=2.20 1969IEa (16183) 221

DH(K1)=2.3 kJ mol-1, DS(K1)=50.2 J K-1 mol-1

Fe++ kin NaClO4 35°C 1.0M U TI K1=0.76 1968WSf (16184) 222

K1=1.74(0 C),1.0(25 C); When I=4: K1=0.40(45 C).

At I=4: K(Fe+HL)=0.66(0 C), 0.57(5 C), 0.48(10 C), 0.29(25 C)

Fe++	ix	oth/un	?	var	U	K1=0.23	1960BHc (16185)	223
						K(Fe+HL)=-0.21		

Fe++	kin	NaCl04	30°C	1.10M	U	K1=0.04	1956HDb (16186)	224
------	-----	--------	------	-------	---	---------	-----------------	-----

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

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

Fe++	sp	KN03	6.1°C	0.48M	U	I	K1=0.92	1954PAb (16843)	225
------	----	------	-------	-------	---	---	---------	-----------------	-----

At I=0 corr. K1=2.17

Se--		H2L		Selenide			(6335)		
------	--	-----	--	----------	--	--	--------	--	--

Selenide;

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

Fe++	oth	oth/un	25°C	0.0	U			1964BUe (16939)	226
------	-----	--------	------	-----	---	--	--	-----------------	-----

Kso=-26.0

Estimated from thermodynamic data

Fe++	oth	oth/un	25°C	0.0	U			1952LAa (16940)	227
------	-----	--------	------	-----	---	--	--	-----------------	-----

Kso=-26

Estimated from thermodynamic data

SeCN-		HL		Selenocyanate			CAS 73102-11-2 (440)		
-------	--	----	--	---------------	--	--	----------------------	--	--

Selenocyanate;

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

Fe++	sp	oth/un	?	var	U	M		1967BPd (16983)	228
------	----	--------	---	-----	---	---	--	-----------------	-----

K(FeA2+2L)=3.43

A=dimethylglyoxime. Medium: KL

Se04--		H2L		Selenate			CAS 7783-08-6 (459)		
--------	--	-----	--	----------	--	--	---------------------	--	--

Selenate;

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

Fe++	kin	NaCl04	25°C	4.0M	U	TI	K1=1.08	1968WSf (17101)	229
------	-----	--------	------	------	---	----	---------	-----------------	-----

K(Fe+HL)=0.23

K1=0.71(35 C); K(Fe+HL)=0.68(0 C), 0.64(5 C), 0.54(10 C).

At I=1: K1=1.73(0 C), 1.40(10 C)

Si03--		H2L		Silicate			CAS 7699-41-4 (747)		
--------	--	-----	--	----------	--	--	---------------------	--	--

Silicate; Si02(OH)2--


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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       oth none   60°C   0.0   U T                      1969HEa (17208) 230
                                         *Ks(Fe2SiO4(s)+4H)=14.43
Method: estimated data.(Fe2SiO4)
*Kso=11.96(100 C); 9.50(150 C); 7.67(200 C); 6.25(250 C); 5.05(300 C)
-----

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Fe++       oth none   25°C   0.0   U                      1957BAa (17209) 231
From thermodynamic data. Ks(FeSiO3(s)+H2O=SiO2(s)+Fe+20H)=-18.92
*****
SiW11039----- H8L                      (2464)
alpha-Heterosilicon-polytungstate;
-----

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```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       gl  NaNO3   25°C   1.00M U          K1=7.30      1984COa (17235) 232
                                         K(beta1 isomer)=6.87
                                         K(beta2 isomer)=6.86
                                         K(beta3 isomer)=6.90
*****
CH3NO              HL      Formaldoxime      CAS 62479-75-2 (4206)
Formaldoxime; CH2:N.OH
-----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       oth oth/un 20°C   0.10M U          K1=22.9      1971BJa (17669) 233
Paper electrophoresis, acetate-veronal buffer
*****
CH4N2O              L      Urea              CAS 57-13-6 (2018)
Carbamide, Urea; (H2N)2CO
-----

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```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       vlt NaClO4 25°C   0.20M U          K1=0.41      B2=0.90      1985MCC (17715) 234
                                         K3=-0.046
                                         K4=0.32
                                         K5=0.52
                                         K6=-0.40
*****
CH5N              L      Methylamine      CAS 74-89-5 (155)
Methylamine; CH3.NH2
-----

```

```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       gl  none   25°C   0.0   C   H                      1998DFd (18015) 235
                                         K(Fe(CN)6+HL)=2.66
                                         K(Fe(CN)6+2HL)=4.64
                                         K(Fe(CN)6HL+HL)=1.98
Constants are for ion pair formation. DH(Fe(CN)6+HL)=-5.8 kJ mol-1;
-----

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DH(Fe(CN)6+2HL)=8.8; DH(Fe(CN)6HL+HL)=14.6.

CH5NO L CAS 593-56-6 (4208)

O-Methylhydroxylamine; H2N.O.CH3

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

Fe++ kin oth/un 25°C ? U HM 1994LCa (18038) 236

K(FeA+L=FeAL)=2.28

A=Desulfovibrin. DH(FeA+L)=-23.0 kJ mol⁻¹, DS(FeA+L)=-52.3 J K⁻¹ mol⁻¹

CH606P2 H4L Medronic acid CAS 1984-15-2 (2384)

Methanediphosphonic acid; CH2(P03H2)2

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

Fe++ gl KCl 25°C 0.10M U K1=12.6 B2=18.8 1967KLa (18281) 237

K(Fe+HL)=6.6

K(Fe+2HL)=11.9

K(2Fe+L)=15.4

K(2Fe+HL)=9.1

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

Fe++ gl KCl 25°C 1.0M C K1=3.05 B2= 5.01 1987MIa (18879) 238

Fe++ dis NaCl04 20°C 0.10M U K1=2.30 B2=1.88 1969MBe (18880) 239

Fe++ gl NaCl04 25°C 1.0M U K1=3.05 B2=5.15 1965BCb (18881) 240

Fe++ vlt NaCl04 25°C 0.50M U B2=4.52 1954SLb (18882) 241
B3=5.22

Fe++ vlt oth/un ? ? U B2=9.57 1941T0a (18883) 242

Fe++ con oth/un 18°C 0.0 U K1=>4.7 1932MDa (18884) 243

Fe++ sol oth/un 25°C >1.0 U K2=>2.85 1905SAb (18885) 244

C2H3O2Cl HL Chloroacetic CAS 79-11-8 (34)

Chloroethanoic acid; ClCH2.COOH

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

Fe++ EMF NaCl04 20°C 1.00M U K1=1.9 B2=3.7 1969PJc (19361) 245

C2H4OS HL Thioacetic acid CAS 507-09-5 (4223)

Thiolethanoic acid; CH₃.CO.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	30°C	60%	U		K1=4.2 B2=8.00	19720Tc (19507)	246
Medium: 60% dioxan, 1 M (K,Na)NO ₃									

C2H4O2		HL		Acetic acid			CAS 64-19-7	(36)	
Ethanoic acid; CH ₃ .COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	dis	NaClO ₄	20°C	0.10M	U		K1=1.90	1969MBe (19956)	247
Fe++	gl	NaClO ₄	25°C	3.00M	U		K1=0.54	19680Va (19957)	248
Fe++	EMF	KCl	25°C	0.50M	U		K1=1.82	1961NPa (19958)	249
Medium: HCl									

Fe++	oth	oth/un	?	0.0	U		K1=1.40	1956YFa (19959)	250

C2H4O2S		H2L		Thioglycolic			CAS 68-11-1	(596)	
Mercaptoethanoic acid; HS.CH ₂ .COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO ₄	30°C	0.10M	U		K1=5.32 B2= 9.40	1988NDa (20318)	251
Fe++	sol	none	25°C	0.0	U		B2=10.92	1953LKb (20319)	252
							K(Fe(OH)L+H=Fe+L)=1.62		

C2H5NO2		HL		Glycine			CAS 56-40-6	(85)	
2-Aminoethanoic acid; H ₂ N.CH ₂ .COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	1.0M	C		K1=3.73 B2= 6.65	1987MIa (21544)	253
							B3=8.87		
Fe++	EMF	NaClO ₄	25°C	3.0M	C		K1=4.20	1982BPc (21545)	254
Method: Pt/H ₂ electrode.									
Fe++	kin	oth/un	25°C	0.10M	U	H		1978TMa (21546)	255
							K(Fe(CN) ₅ +L)=4.02		
Medium: LiClO ₄ . DH ₁ =-35.5 kJ mol ⁻¹ , DS ₁ =-42 J K ⁻¹ mol ⁻¹									
Fe++	gl	none	25°C	0.00	U T		K1=4.31	1972IJb (21547)	256
10 C: K1=4.36; 40 C: K1=4.28									
Fe++	gl	KNO ₃	25°C	0.10M	U	T	K1=4.13 B2=7.65	1969GEb (21548)	257

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Fe++      gl  KCl      20°C  1.0M U      T K1=3.83      1959PEc (21549) 258
-----
Fe++      gl  oth/un  20°C  0.01M U      K1=4.3      B2=7.8      1953ALa (21550) 259
*****
C2H6N2O          L      Methylurea      CAS 598-50-5 (2019)
N-Methylurea; CH3.NH.CO.NH2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      vlt NaClO4 25°C 0.20M U      K1=0.26      B2=0.52      1985Mcc (21967) 260
                                K3=0.20
                                K4=0.56
                                K5=0.15
                                K6=0.079
*****
C2H6O          L      Ethanol      CAS 64-17-5 (1913)
Ethanol; CH3.CH2.OH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      sp  non-aq 25°C 100% U      M      1978MBa (22027) 261
                                K(FeA+L)=0.8
Medium: benzene. A=Tetraphenylporphyrin-thiocarbide
*****
C2H6OS          HL      CAS 60-24-2 (841)
2-Mercaptoethanol; HS.CH2.CH2.OH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      gl  oth/un  ?      0.0 U      B2=6.6      1961AMa (22064) 262
*****
C2H7NO          L      Ethanolamine      CAS 141-43-5 (1057)
2-Aminoethanol; H2N.CH2.CH2.OH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      oth oth/un 25°C 0.43M U      K1=1.90      B2=3.05      1966SKe (22402) 263
*****
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
-----
Fe++      gl  none   25°C  0.0 C      H      1998DFd (23153) 264
                                K(Fe(CN)6+HL)=2.80
                                K(Fe(CN)6+H2L)=4.80
                                K(Fe(CN)6+2H2L)=7.09
                                K(Fe(CN)6H2L+H2L)=2.29
Constants are for ion pair formation. DH(Fe(CN)6+HL)=-3.7 kJ mol-1;

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DH(Fe(CN)6+H2L)=3.4; DH(Fe(CN)6+2H2L)=12.2; DH(Fe(CN)6H2L+H2L)=8.8.

Fe++ gl alc/w 30°C 5% M K1=4.28 1994RRb (23154) 265
Medium: 5% v/v EtOH/H2O, 0.10 M KNO3.

Fe++ gl KCl 25°C 1.0M C K1=4.26 B2= 7.73 1987MIa (23155) 266
B3=10.17

Fe++ gl KNO3 25°C 1.0M C TIH R K1=4.34 B2=7.65 1984PAa (23156) 267
B3=9.70
IUPAC evaluation. DH(K1)=-21.1, DH(K2)=-22.4, DH(K3)=-22.8 kJ mol-1

Fe++ oth oth/un ? ? U K1=4.37 B2=7.65 1969MMb (23157) 268
K3=1.99

Data from survey of literature data

Fe++ cal KCl 25°C 1.0M U H 1960CPa (23158) 269
DG(K1)=-24.66 kJ mol-1, DH=-21.1, DS=12; DG(B2)=-43.68, DH=-43.5, DS=0.8;
DG(B3)=-55.39, DH=-66.3, DS=-36

Fe++ gl oth/un 25°C 1.40M U K1=4.34 B2=7.34 1957PBa (23159) 270
K3=2.05

Fe++ EMF KCl 30°C 1.0M U K1=4.28 B2=7.53 1941BJa (23160) 271
K3=1.99

Method: H electrode

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
Fe++	gl	KNO3	25°C	0.10M	C		K1=12.9 K(FeL+H)=4.87 K(FeHL+H)=3.3	1997DBb (23366)	272

Fe++	gl	KCl	25°C	0.10M	U		K1=9.05 K(Fe+HL)=5.31 K(2Fe+H-1L)=19.59 K(2Fe+L)=13.89 K(2Fe+HL)=7.99	1967KLa (23367)	273
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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
Fe++	gl	KNO3	25°C	0.1M	C		K1=7.70 B(FeHL)=14.35 B(FeH2L)=19.34	1985MMA (23453)	274

C3H4N2 L Pyrazole CAS 288-13-1 (367)
1,2-Diazole, pyrazole; cyclo(-NH.N:CH.CH:CH-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	vlt	NaNO3	25°C	0.10M	U			K1=0.84 B3=1.28 B4=1.52	1968Cwa (23572)	275

C3H4N2 L Imidazole CAS 288-32-4 (90)
1,3-Diazole, imidazole; C3H4N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	sp	non-aq	20°C	100%	U			K(FeP(DMSO)+L)=5.81 K(FePL+L)=3.87	1990ABa (23879)	276

In DMSO. FeP = phthalocyaninatoiron(II)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	sp	non-aq	20°C	100%	U	M		K(FeA+2L)=7.46	1978KBb (23880)	277

Medium: DMSO, 0.1 M Et4NClO4. A=Phthalocyanine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	kin	oth/un	25°C	0.10M	U	H		K(Fe(CN)5+L)=5.26	1978TMa (23881)	278

Medium: LiClO4. DH1=-38.0 kJ mol-1, DS1=-29 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	sp	oth/un	25°C	0.05M	U	I M		K(FeA(OH)+HL+L)=5.08 K(FeA+2L)=6.00	1976HFa (23882)	279

Medium: 0.05 M hexadecyltrimethylammonium bromide. FeA=hemin. Data also for 0.5 M Na dodecylsulfate

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	oth	KN03	30°C	0.16M	U			K1=1.81 B2=3.04	1966SKc (23883)	280

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KCl	0°C	.058M	U T			K1=3.31 B2=6.41	1961Sma (23884)	281

25 C: K1=3.20, K2=3.17; 45 C: K1=3.25, K2=2.96

C3H4N2S HL Imidazolethiol CAS 872-35-5 (1823)
2-Mercaptoimidazole; C3H3N2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	NaClO4	25°C	0.10M	U			K1=5.67 B2=10.04	1977STc (23970)	282

C3H4O3 HL Pyruvic acid CAS 127-17-3 (1152)
2-Oxopropanoic acid; CH3.CO.COOH

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

 Fe++ gl NaCl04 25°C 3.00M C K1=0.69 1978FGa (24050) 283

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

Fe++ gl KCl 25°C 1.0M C K1=2.24 1987MIa (24441) 284

Fe++ gl NaCl04 25°C 1.00M C K1=2.17 B2=3.21 1977DEa (24442) 285

Fe++ vlt NaCl04 25°C 0.50M U B2=2.22 1954SLb (24443) 286

Fe++ vlt oth/un ? 1.0M U K1=2.8 1951SCa (24444) 287

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

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

Fe++ gl NaCl04 30°C 0.10M U K1=6.22 B2=11.17 1988NDa (25142) 288

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

Fe++ gl alc/w 30°C 5% M K1=6.97 1994RRb (26170) 289
 Medium: 5% v/v EtOH/H₂O, 0.10 M KNO₃.

Fe++ gl KCl 25°C 1.0M C K1=2.53 1987MIa (26171) 290

Fe++ gl KCl 20°C 1.0M U T K1=3.54 1959PEc (26172) 291

Fe++ gl oth/un 25°C 0.01M U B2=7.3 1950ALa (26173) 292

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

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

Fe++ gl oth/un 20°C 0.01M U B2=4 1950ALa (26454) 293

C3H7NO2 HL Sarcosine CAS 107-97-1 (87)
 N-Methyl-2-aminoethanoic acid; CH₃.NH.CH₂.COOH

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

Fe++ gl KCl 20°C 1.0M U K1=3.52 1959PEc (26601) 294

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

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Fe++      gl  oth/un 20°C 0.01M U      K1=6.2      1952ALa (26774) 296
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C3H7NO3 HL Serine CAS 56-45-1 (49)
2-Amino-3-hydroxypropanoic acid; H2N.CH(CH2.OH)COOH

Fe++ g1 KNO3 40°C 0.20M U T H K1=3.62 B2=6.36 1968Rmb (27128) 298
15 C: K1=3.67, K2=2.78. DH(B2)=-6.3 kJ mol⁻¹, DS=100 J K⁻¹ mol⁻¹

Fe++ gl KCl 20°C 1.0M U K1=3.43 1959PEc (27130) 300

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Fe++      gl  oth/un 20°C 0.01M U      B2=7.0      1950ALa (27131) 301
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C3H8N05P	H3L	Glyphosate	CAS 1071-83-6	(1617)
N-(Phosphonomethyl)glycine; H2O3P.CH2.NH.CH2.COOH				

C3H8N2O L Dimethylurea CAS 96-31-1 (2021)
1,3-Dimethylurea; CH₃.NH.CO.NH.CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	vlt	NaClO4	25°C	0.20M	U			K1=-0.15 K3=1.20 K4=-0.15	B2=0.08 1985McC	(27475) 303

C3H8N2O	L	Ethylurea	CAS 625-52-5	(2020)
N-Ethylurea; H2N.CO.NH.C2H5				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Fe++ vlt NaCl04 25°C 0.20M U K1=0.041 B2=0.24 1985Mcc (27483) 304
 K3=-0.097
 K4=0.11
 K5=0.84
 K6=0.079

C3H8N2O2 HL CAS 71292-18-7 (356)
 2,3-Diaminopropanoic acid; H2N.CH2.CH(NH2).COOH

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

Fe++ gl oth/un 20°C 0.01M U B2=5.0 1952ALa (27550) 305

C3H8OS2 H2L BAL CAS 59-52-9 (379)
 2,3-Dimercaptopropan-1-ol; HS.CH2.CH(SH).CH2(OH)

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

Fe++ gl KCl 30°C 0.10M U B2=15.78 1962LJa (27657) 306
 B(Fe2L3)=28

C3H8O2S HL 1-Thioglycerol CAS 96-27-5 (1848)
 3-Mercapto-1,2-propanediol HS.CH2.CH(OH).CH2.OH

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

Fe++ gl NaCl04 20°C 0.10M U TI K1=13.37 1986NDb (27710) 307

C3H8O3S3 H3L Unithiol CAS 74-61-3 (1271)
 2,3-Dimercaptopropanesulfonic acid; HS.CH2.CH(SH).CH2.SO3H

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

Fe++ sp NaCl 25°C 0.1M U K1=6.02 B2=11.42 1999PAa (27785) 308
 Also published in Zh. Neorg.Khim. (1999) 44, 590

 Fe++ sp oth/un ? 0.20M U B2=7.64 19720Fa (27786) 309

C3H9N L n-Propylamine CAS 107-10-8 (2356)
 1-Aminopropane; H2N.CH2.CH2.CH3

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

Fe++ sp non-aq 23°C 100% U M 1982HDa (27831) 310
 K(FeA+L)=2.58
 K(FeAL+L)=1.33

Medium: toluene. A='capped' porphyrin

C3H9N L iso-Propylamine CAS 75-31-0 (157)
 2-Propylamine; CH3.CH(CH3).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	non-aq	25°C	100%	U	M	1994STa (27844) 311		
							K(FeA2B2+L=FeA2L+B)=4.00		
							K(FeA2BL+L=FeA2L2+B)=3.08		
							K(FeB2C2+L=FeBC2L+B)=4.30		
							K(FeBC2L+L=FeC2L2+B)=3.26		
							K(FeA2D2+L=FeA2DL+D)=1.18; K(FeC2D2+L=FeC2DL+D)=0.52. Medium: CH2C12		
							A=dmgdiphenylborate, B=CH3CN, C=dmgdifluoroborate, D=Pyridine		

C3H9N3O2 HL							CAS 471915-95-4 (8549)		
2,3-Diamino-N-hydroxypropanamide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.20M	C		K1=4.34	2002ECa (27983) 312	
							B(FeHL)=12.28		
							B(FeH-1L)=-5.54		

C3H10N03P H2L							(1986)		
1,1-Dimethyl-1-aminomethylphosphonic acid; H2N.C(CH3)2.P03H2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.10M	U		K1=4.68 B2=8.61	1969DMd (28075) 313	
							K(Fe+HL)=3.07		

C3H11N06P2 H4L							(6735)		
N-Methylimino-N,N-bis(methylenephosphonic acid); CH3.N(CH2P03H2)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=9.12	1993SKc (28448) 314	
							K(FeL+H)=6.97		
							K(FeHL+H)=4.28		

C3H12N09P3 H6L NTPA							CAS 6419-19-8 (2920)		
Nitrilotris(methylenephosphonic acid); N(CH2P03H2)3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=12.7	1997DBb (28561) 315	
							K(FeL+H)=6.4		
							K(FeHL+H)=6.30		

Fe++	gl	KNO3	25°C	0.10M	C		K1=13.5	1989SAa (28562) 316	
							K(FeL+H)=6.49		
							K(FeHL+H)=5.41		
							K(FeH2L+H)=4.2		

Fe++	EMF	NaClO4	25°C	1.0M	U	K1=15.3 K(Fe+HL)=9.9 K(Fe+H2L)=6.0	1987PLa (28563)	317
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Fe++	gl	alc/w	25°C	10%	U	K1=12.60 K(FeL+H)=7.00 K(FeHL+H)=5.67 K(FeH2L+H)=4.36	1987SHa (28564)	318
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In 10% ethanol/H2O; I=0.1 M NaClO4.

C4H3N3O3S H3L Thiovioluric CAS 23036-77-3 (2000)
2-Thio-4,5,6(H)-pyrimidinetetrone 5-oxime

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	25°C	0.50M	C		B3=8.60	1984HNb (28719)	319

Fe++	sp	NaNO3	25°C	0.50M	U		B3=9.16	1981DDa (28720)	320
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Using pH titrations, B3=9.04

Fe++	gl	NaNO3	25°C	0.10M	C		K(Fe+3H2L)=9.04	1979DDb (28721)	321
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Fe++	sp	oth/un	20°C	0.10M	U		K(Fe+4H2L)=19.6	1971TTa (28722)	322
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Medium: 50% dioxan, 0.1 M NaClO4

C4H3N3O4 H3L Violuric acid CAS 26351-19-9 (1208)
2,4,5,6-(1H,3H)Pyrimidinetetrone-5-oxime, 5-isonitrosobarbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl	25°C	0.10M	C		K(Fe+H2L)=2.96	2002KSa (28746)	323

Fe++	gl	NaNO3	25°C	0.50M	C		B3=8.65	1984HNb (28747)	324
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Fe++	sp	NaNO3	25°C	0.50M	U		B3=8.92	1981DDa (28748)	325
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Using pH titrations, B3=8.60

Fe++	gl	NaNO3	25°C	0.50M	U		B3=8.60	1978DDa (28749)	326
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By spectrophotometry: B3=8.4

C4H4N2 L Pyrazine CAS 290-37-9 (620)

1,4-Diazine, Pyrazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	23°C	?	U	M		1983JSa (28792)	327
							K(Fe(CN)5L+H)=0.065		

C4H4N2O2S H2L Thiobarbituric CAS 504-17-6 (4279)

4,6-Dihydroxy-2-mercaptopyrimidine, 2-thiobarbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl04	31°C	0.10M	U	T H	K1=5.82 B2=10.21	1984SJa (28888)	328
Also data for 18 and 42 C. DH(K1)=-59.5 kJ mol-1, DS(K1)=-84.6 J K-1 mol-1									
DH(K2)=-42.0, DS(K2)=-54.4.									

C4H4O4 H2L Fumaric acid CAS 110-17-8 (289)

trans-Butenedioic acid; HOOCH:CH:COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl04	37°C	0.15M	C		K1=2.78 B2=4.99 B3=7.19	1974CCa (29198)	329

C4H6N2 L 2-Me-Imidazole CAS 693-98-1 (122)

2-Methyl-1,3-diazole; C3H3N2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	non-aq	25°C	100%	U	M		1994STa (29481)	330
							K(FeA2B2+L=FeA2BL+B)=2.41		
							K(FeA2BL+L=FeA2L2+B)=-1.00		
							K(FeB2C2+L=FeBC2L+B)=3.20		
							K(FeBC2L+L=FeC2L2+B)=1.00		

Medium: CH2Cl2. A=Dimethylglyoximediphenylborate, B=CH3CN, C=dmgdifluoroborate, D=Pyridine

Fe++	sp	non-aq	20°C	100%	U	M		1993PMa (29482)	331
							K(FeALC+L=FeAL2+C)=-3.80		
							K(FeBLC+L=FeBL2+C)=-4.62		
							K(FeAC2+L=FeACL+C)=1.58		
							K(FeBC2+L=FeBCL+C)=-0.28		

In toluene. A=Tetramesitylporphine, B=Tetraphenylporphine, C=Tosylmethylisocyanide. K(FeAL+L)=4.95, K(FeBL+L)=4.89

Fe++	nmr	non-aq	25°C	100%	U	M		1979HSa (29483)	332
							K(FeA+L=FeAL)=0.87		

Medium: MeCN solution, A=tetraMe-1,4,8,11-tetraazocyclotetradecatetraene

Fe++	vlt	non-aq	20°C	100%	U	M		1978KBb (29484)	333
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K(FeA+L)=2.84

K(FeA+2L)=4.84

Medium: DMSO. A=Phthalocyanine. Cyclic voltammetry also used

C4H6N2 L 4-Me-Imidazole CAS 822-36-6 (353)

4-Methyl-1,3-diazole; C3H3N2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	kin	none	38°C	0.0	U	T H			2000YWa (29527)	334

K(FeC+L)=1.27

FeC: cytochrome c. Method: 1H nmr in D2O. Also data at 42C. K(FeC+L)=1.58.

DH=135 kJ mol⁻¹, DS=459 J K⁻¹ mol⁻¹.

C4H6N2 L N-Me-Imidazole CAS 616-47-7 (354)

N-Methyl-1,3-diazole; C3H3N2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	EMF	KCl	25°C	1.00M	U			K1=2.43	1995NTa (29585)	335

Fe++	sp	non-aq	25°C	100%	U	M			1994BGb (29586)	336
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K(FeA+L)=5.41

Medium:Toluene. A:(OC20)-linked capped porphyrin

Fe++	sp	non-aq	23°C	100%	U	M			1982HDa (29587)	337
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K(FeA+L)=3.68

Medium: toluene. A='capped' porphyrin

Fe++	sp	non-aq	23°C	100%	U	HM			1980ELa (29588)	338
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K(FeA+L)=2.90

Medium: toluene. A= "Capped" porphyrin. DH=-26 kJ mol⁻¹.

Fe++	sp	non-aq	25°C	100%	U	M			1980ELa (29589)	339
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K(FeA+L)=3.31

Medium: toluene. A="Homologous capped" porphyrin

Fe++	sp	non-aq	23°C	100%	U	M			1979BEa (29590)	340
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K(FeA+L)=3.31

K(FeAL+L)=0.77

Medium: toluene. A="Capped Homologous" Porphyrin. At 0 C, K(FeAL+O2)=0.92

Fe++	sp	non-aq	23°C	100%	U				1979BEa (29591)	341
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K(FeA+L)=2.90

Medium: toluene. FeA=a substituted porphyrinato-Fe(II)

K(FeAL+O2)=0.65

Fe++	vlt	non-aq	20°C	100%	U	M			1978KBb (29592)	342
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K(FeA+2L)>7.5

Medium: DMSO. A=Phthalocyanine

C4H6N2S HL Methimazole CAS 60-56-0 (1824)
N-Methyl-2-mercaptoimidazole; C3H2N2(CH3).SH

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

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

C4H6O4S H3L Thiomalic acid CAS 70-49-5 (109)
2-Mercaptosuccinic acid, 2-Sulfanyl-1,4-butanedioic acid; $\text{HOOC.CH(SH).CH}_2\text{.COOH}$

C4H6O5 H2L Malic acid CAS 617-48-1 (393)
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; $\text{HOOC.CH}_2\text{.CH(OH).COOH}$

C4H6O5 H2L Diglycolic acid CAS 110-99-6 (243)
Di(carboxy)methyl ether, 2,2'-Oxydiethanoic acid; HOOC.CH2.O.CH2.COOH

Fe++ gl KNO3 25°C 0.10M U K1=2.63 1975MTc (30873) 350

Fe++ gl NaClO4 25°C 0.50M U K1=2.18 1972NAd (30874) 351

C4H6O6 H2L D-Tartaric acid CAS 147-71-7 (93)
D-Tartaric acid, D-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

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

Fe++ nmr none 25°C U M 1990GKc (30974) 352
K(Fe+H2L=FeHL+H)=1.11

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

Fe++ ix oth/un 30°C dil C T K1=2.17 1992LHb (31237) 353
Medium: 0.2-5.0 mM tartaric acid eluent. At 40 C, K1=2.21

Fe++ nmr none 25°C U M 1990GKc (31238) 354
K(Fe+H2L=FeHL+H)=1.16

Data for d,l-Tartaric acid

Fe++ dis NaClO4 20°C 0.10M U K1=2.69 B2=4.68 1969MBe (31239) 355

Fe++ gl NaClO4 25°C 1.00M U K1=1.43 B2=2.50 1968BRb (31240) 356

Fe++ ix NaClO4 20°C 0.10M U K1=2.24 1964TIa (31241) 357

Fe++ vlt oth/un ? ? U K2=4.85 1945TOa (31242) 358

C4H7NO2 HL (8137)
(S)-Azetidine-2-carboxylic acid;

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

Fe++ gl KNO3 25°C 0.10M C K1=4.3 B2= 8.10 1989ARa (31441) 359

C4H7NO2 HL CAS 57-71-6 (6204)
But-2,3-dione monoxime; CH3.CO.C(:NOH).CH3

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

Fe++ gl alc/w 25°C 75% U K1=8.2 B2=13.60 1986BTa (31455) 360
K3=4.2

Medium: 75% MeOH/H2O, 0.1 M NaClO4

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

Fe++	gl	KNO3	25°C	0.10M	M	K1=5.34	B2= 8.57	1981GVa (31853)	361
Fe++	gl	KCl	20°C	1.0M	U	K1=4.34		1959PEc (31854)	362
Fe++	gl	oth/un	20°C	0.01M	U	B2=8.5		1952ALa (31855)	363

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
Fe++	EMF	NaClO4	20°C	1.00M	C	K1=6.10	B2=10.55	2000BMa (32249)	364
Method: Pt/Fe+++/Fe++ and glass electrodes.									
Fe++	gl	KCl	25°C	1.0M	C	K1=5.45	B2= 9.82	1987MIa (32250)	365
Fe++	gl	NaClO4	25°C	0.50M	U	K1=5.54	B2=9.81	1972NAC (32251)	366
Fe++	gl	KNO3	20°C	0.10M	U	K1=5.8	B2=10.1	1964ANa (32252)	367

C4H8N2O2			H2L	Dimethylglyoxim		CAS 95-45-4		(2032)	
2,3-Butanedione dioxime, Dimethylglyoxime; CH3.(C:NOH).(C:NOH).CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	oth	oth/un	27°C	?	U	B2=7.25		1957SRb (32539)	368

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
Fe++	gl	NaCl	25°C	1.00M	C	K1=3.43	B2=5.90	1996BFb (32695)	369
Fe++	gl	NaClO4	25°C	3.00M	C	K1=4.366	B2=7.57	1974BWa (32696)	370
						B3=10.259			
Fe++	gl	oth/un	20°C	0.01M	U	B2=6.5		1950ALa (32697)	371

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
Fe++	gl	KCl	20°C	1.0M	U	K1=2.62		1959PEc (33023)	372

C4H9NO2			HL	Aminoisobutyric		CAS 144-90-1		(188)	
2-Amino-2-methylpropanoic acid; H2N.C(CH3)2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	20°C	1.0M	U		K1=3.48	1959PEc (33837)	373

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	20°C	1.0M	U		K1=3.37	1959PEc (33913)	374

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
Fe++	gl	NaCl	37°C	0.15M	U	M		1986XHa (34298)	375
							B(FeHL)=12.44		
							B(FeH2L)=15.10		
							B(FeH-1L(His))=3.446		

Fe++	gl	KNO3	40°C	0.20M	U	T H	K1=3.69 B2=6.50	1968RMB (34299)	376
At 15 C: K1=3.76, K2=2.86. DH(B2)=-8.4 kJ mol-1, DS=96.1 J K-1 mol-1									

Fe++	gl	KCl	20°C	1.0M	U		K1=3.30	1959PEc (34300)	377

C4H10N2O2		HL					CAS 1883-09-6	(45)	
2,4-Diaminobutanoic acid; H2N.CH2.CH2.CH(NH2)COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=5.7	1952ALa (34568)	378

C4H11N		L		iso-Butylamine			CAS 78-81-9	(2355)	
1-Amino-2-methylpropane; H2N.CH2.CH(CH3).CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	non-aq	23°C	100%	U	M		1982HDa (34730)	379
							K(FeA+L)=2.07		
Medium: toluene. A='capped' porphyrin									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	non-aq	25°C	100%	U	M		1994STa (34765)	380
							K(FeA2B2+L=FeA2BL+B)=5.60		
							K(FeA2BL+L=FeA2L2+B)=4.70		

$K(\text{FeB}_2\text{C}_2 + \text{L} = \text{FeBC}_2\text{L} + \text{B}) = 5.90$
 $K(\text{FeBC}_2\text{L} + \text{L} = \text{FeC}_2\text{L}_2 + \text{B}) = 4.67$
 $K(\text{FeA}_2\text{D}_2 + \text{L} = \text{FeA}_2\text{DL} + \text{D}) = 3.54$; $K(\text{FeA}_2\text{DL} + \text{L} = \text{FeA}_2\text{L}_2 + \text{D}) = 2$; $K(\text{FeC}_2\text{D}_2 + \text{L} = \text{FeC}_2\text{DL} + \text{D}) = 2.23$
 Medium: CH_2Cl_2 . A=dmgdiphenylborate, B= CH_3CN , C=dmgdifluoroborate, D=py

C4H11N L t-Butylamine CAS 75-64-9 (158)
 2-Amino-2-methylpropane; $\text{H}_2\text{N} \cdot \text{C}(\text{CH}_3)_3$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	sp	non-aq	25°C	100%	U	M			1994STa (34784)	381
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$K(\text{FeA}_2\text{B}_2 + \text{L} = \text{FeA}_2\text{BL} + \text{B}) = 1.40$

$K(\text{FeA}_2\text{BL} + \text{L} = \text{FeA}_2\text{L}_2 + \text{B}) = 0.04$

$K(\text{FeB}_2\text{C}_2 + \text{L} = \text{FeBC}_2\text{L} + \text{B}) = 1.78$

$K(\text{FeBC}_2\text{L} + \text{L} = \text{FeC}_2\text{L}_2 + \text{B}) = 0.85$

Medium: CH_2Cl_2 . A=Dimethylglyoximediphenylborate, B= CH_3CN , C=dmgdifluoroborate, D=Pyridine

Fe++	sp	non-aq	23°C	100%	U	M			1982HDa (34785)	382
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$K(\text{FeA} + \text{L}) = 0.90$

Medium: toluene. A='capped' porphyrin

Fe++	sp	non-aq	23°C	100%	U	M			1980ELa (34786)	383
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$K(\text{FeA} + \text{L}) = 2.50$

Medium: toluene. A= "Capped" porphyrin.

Fe++	sp	non-aq	23°C	100%	U	M			1979BEa (34787)	384
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$K(\text{FeA} + \text{L}) = 2.23$

Medium: toluene. A="Capped Homologous" Porphyrin

Fe++	sp	non-aq	23°C	100%	U				1979BEa (34788)	385
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$K(\text{FeA} + \text{L}) = 2.50$

Medium: toluene. FeA=a substituted porphyrinato-Fe(II)

C4H11NO2 L Diethanolamine CAS 111-42-2 (89)
 2,2'-Iminodiethanol; $\text{HN}(\text{CH}_2\text{CH}_2\text{OH})_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	oth	oth/un	25°C	0.43M	U			K1=2.37 B2=3.67	1966SKe (34957)	386
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Medium: $\text{CH}_2\text{OHCH}_2\text{NH}_3\text{NO}_3$

C4H11NO8P2 H5L CAS 2439-99-8 (2129)
 N-Carboxymethyl-N,N-bis(methylenephosphonic acid); $\text{HOOC} \cdot \text{CH}_2 \cdot \text{N}(\text{CH}_2 \cdot \text{PO}_3\text{H}_2)_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	gl	KN03	25°C	0.10M	C			K1=11.9	2000SDa (35105)	387
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$K(\text{FeL} + \text{H}) = 6.14$

$K(\text{FeHL} + \text{H}) = 4.56$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.20M	C				B(FeHL)=14.02	2002ECa (35176)	388

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	1.0M	C		K1=5.66 B2= 9.61	1987MIa	(35778)

Fe++ g1 KCl 30°C 1.0M U T H K1=6.23 B2=10.36 1952JHa (35780) 391
40 C: K1=6.03, K2=3.95. DH(K1)=-37.6 kJ mol⁻¹, DH(K2)=-33.4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	sp	non-aq	23°C	100%	U	M			1980ELa (36024)	392

Medium: toluene. A= "Capped" porphyrin.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	sp	NaCl04	25°C	0.10M	U	M	K1=3.4	B2=6.1	1981TBa	(36051)

B3=7.7

Fe++ sp NaClO4 25°C 1.0M C K1=4.10 B2= 7.71 1979MMi (36052) 394
B3=10.51
K(Fe+HL=FeL+H)=1.40
K(FeL+HL=FeL2+H)=0.81
K(FeL2+HL=FeL3+H)=0.10

Fe++ sp NaClO4 25°C 1.00M U K1=4.1 B2=7.71 1977MAa (36053) 395
B3=10.51

C5H4N2O3S H2L Thioorotic acid (4335)
 1,2,3,6-Tetrahydro-2-thio-6-oxo-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl	20°C	0.15M	U		K1=3.92 K(Fe+HL)=2.40	1979DZe (36076)	396

 C5H4N2O4 H2L Orotic acid CAS 65-86-1 (624)
 1,2,3,6-Tetrahydro-2,6-dioxo-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl	20°C	0.15M	U		K1=4.67 K(Fe+HL)=2.57	1979DZe (36112)	397

 C5H4N4O HL Hypoxanthine CAS 68-94-0 (1174)
 6-Hydroxypurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=3.9	1953ALa (36190)	398

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	nmr	none	RT	0	U			1997LCb (36624)	399

K(FeC+L)=0.33
 Medium: D2O. FeC is cytochrome C.

Fe++	nmr	non-aq	24°C	100%	U	M		1991LSd (36625)	400
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K(FeA+L)=2.65
 K(FeAL+L)=1.60
 Medium: MeCN. A=N,N'-ethylene-bis(trifluoroacetylacetoneimine)

Fe++	sp	non-aq	20°C	100%	U			1985PEa (36626)	401
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K(FeAS2+L=FeASL+S)=5.59
 KFeASL+L=FeAL2+S)=2.48
 Medium (S): DMSO. A=phthalocyanin

Fe++	sp	non-aq	20°C	100%	U			1985PEb (36627)	402
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K(FeABS+L=CoABL+S)=6.43
 K(FeABL+L=CoAL2+B)=-1.34
 Medium (S): DMSO. A=phthalocyanin. B=CO

Fe++	sp	non-aq	23°C	100%	U	HM		1980ELa (36628)	403
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K(FeA+L)=1.88
 Medium: toluene. A= "Capped" porphyrin. DH=-22.0 kJ mol⁻¹

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Fe++      sp  non-aq  25°C 100%  U    M                      1980ELa (36629) 404
                        K(FeA+L)=2.17
Medium: toluene. A="Homologous capped" porphyrin
-----
Fe++      vlt non-aq  20°C 100%  U    M                      1978KBb (36630) 405
                        K(FeA+L)=3.10
                        K(FeA+2L)=4.98
Medium: DMSO. A=Phthalocyanine. K(FeA+2L)=4.47 by spectroscopy
-----
Fe++      gl  KNO3    25°C 0.50M  U          K1=0.6    B2=0.90    1973BJa (36631) 406
-----
Fe++      gl  oth/un  25°C 0.50M  U          K1=0.71    1950BJa (36632) 407
                        B4=6.7 ?
Medium: 0.5 M C5H5N.HNO3
*****
C5H5NO          L      3-Pyridinol      CAS 109-00-2 (1475)
3-Hydroxypyridine; C5H4N.OH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      kin NaClO4  25°C 0.10M  U                      1998Cwa (36707) 408
                        K(Fe(CN)5(H2O)+L)=4.88
Medium: 0.1 M LiClO4, pH=5
*****
C5H5NO          HL      4-Pyridinol      CAS 626-64-2 (1876)
4-Hydroxypyridine, Pyridin-4-one;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      kin NaClO4  25°C 0.10M  U                      1998Cwa (36712) 409
                        K(Fe(CN)5(H2O)+L)=2.40
Medium: 0.1 M LiClO4, pH=5.
*****
C5H5NOS          L          CAS 1121-31-9 (3052)
3-Mercaptopyridine 1-oxide; C5H4N(-O)(SH)
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      gl  oth/un  20°C 0.01M  U          K1=4.7    1956ARb (36731) 410
*****
C5H5NO2          HL          CAS 35940-93-3 (3618)
3-Furancarboxaldehyde oxime (3-Furfuraldoxime); C4H3O.CH(:N.OH)
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      gl  diox/w  20°C 60%   U    I      K1=5.20    1979GBd (36815) 411
                        B(FeHL2)=21.98
*****
C5H5N3O4          H2L          CAS 59048-06-5 (6096)

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N-Methylvioluric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	25°C	0.50M	C		B3=9.38	1984HNb (36877)	412

Fe++	gl	NaNO3	25°C	0.50M	C		B3=9.38	1978VNa (36878)	413
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C5H5N5O L CAS 700-02-7 (3033)

Adenine N-Oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	25°C	?	U		K1=2.80	1960PEb (37003)	414

C5H5O2F3 HL CAS 367-57-7 (163)
1,1,1-Trifluoropentane-2,4-dione; CF3.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	alc/w	25°C	75%	C		K1=4.72 B2= 9.01 B3=12.2	1998ERa (37052)	415

Medium: 75% v/v EtOH/H2O, 0.10 M KCl

C5H6 HL Cyclopentadiene CAS 542-92-7 (4288)
Cyclopentadiene; cyclo(-CH:CH.CH2.CH:CH-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	NaClO4	25°C	0.10M	U		B2=18.9	1972BSf (37076)	416

C5H6N2 L 2-Methylpyrazin CAS 109-08-0 (1785)
2-Methylpyrazine, 2-Methyl-1,4-diazine; C4H3N2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	NaCl	25°C	0.10M	U	M		1976SHa (37134)	417

X= Dimethylpyrazine

C5H6N2O2S HL CAS 15112-09-1 (8298)
N-Methyl-2-thiobarbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	31°C	0.10M	U	T H	K1=5.92 B2=10.41	1984SJa (37325)	418

Also data for 18 and 42 C. DH(K1)=-65.8 kJ mol⁻¹, DS(K1)=-104 J K⁻¹ mol⁻¹
DH(K2)=-43.1, DS(K2)=-56.3.

C5H6O4S3 H2L (7055)
Trithiocarboglycolic acid; HOOC.CH2.S.CS.S.CH2.COOH

C5H6O7	H3L	(8107)
Carboxymethyltartronic acid;		

C5H7NO3	HL	CAS 29917-12-2 (5671)
2,3,4-Pentanetrione-3-oxime;		

C5H7N06P2	H4L	CAS 186599-36-0	(7613)
2,6-Pyridinediphosphonic acid;			

C5H7N3 L (1482)
2-Amino-4-methyl-1,3-diazine; C4H2N2(NH2)(CH3)

At pH 6-7, phosphate buffer. Data also for bis-bipyridyl-xylenes and hexane

C5H7N3O2 L (6254)
1-Carbamido-3-methyl-pyrazol-5-one; CH3.C3H2N2(:O).CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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 Fe++ gl diox/w 25°C 50% U K1=7.37 B2=13.19 1979PDa (37597) 424

C5H8N2 L CAS 1759-84-0 (173)
 1,2-Dimethylimidazole; C3H2N2(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	sp	non-aq	20°C	100%	U	M		1993PMa (37625)	425
							K(FeALC+L=FeAL2+C)=-4.54		
							K(FeBLC+L=FeBL2+C)=-7.04		
							K(FeAC2+L=FeACL+C)=0.08		
							K(FeBC2+L=FeBCL+L)=-2.07		

In toluene. A=Tetramesitylporphine, B=Tetraphenylporphine, C=Tosylmethylisocyanide. K(FeAL+L)=2.92, K(FeALCO+L=FeAL2+CO)=-4.22

Fe++	sp	non-aq	23°C	100%	U	TI M		1982HDa (37626)	426
							K(FeA+L)=4.40		
							K(FeAL+L)=0.31		

Medium: toluene. A=Tetra(4-methoxy)phenylporphyrin. At 45 C, K(FeAL+L)=2.19.
 In DMF: K=2.09

Fe++	sp	non-aq	23°C	100%	U	M		1982HDa (37627)	427
							K(FeA+L)=3.89		

Medium: toluene. A='capped' porphyrin

Fe++	sp	non-aq	23°C	100%	U	M		1980ELa (37628)	428
							K(FeA+L)=3.06		

Medium: toluene. A= "Capped" porphyrin.

Fe++	sp	non-aq	25°C	100%	U	M		1980ELa (37629)	429
							K(FeA+L)=3.61		

Medium: toluene. A="Homologous capped" porphyrin

Fe++	sp	non-aq	23°C	100%	U	M		1979BEa (37630)	430
							K(FeA+L)=3.61		

Medium: toluene. A="Capped Homologous" Porphyrin

Fe++	sp	non-aq	23°C	100%	U	T		1979BEa (37631)	431
							K(FeA+L)=3.61		

Medium: toluene. FeA=a substituted porphyrinato-Fe(II)

Fe++	vlt	non-aq	20°C	100%	U	M		1978KBb (37632)	432
							K(FeA+2L)=2.38		
							K(FeA+2L)=3.43		

Medium: DMSO. A=Phthalocyanine. Cyclic voltammetry also used

 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
Fe++	gl	alc/w	25°C	75%	C	I		K1=6.38 B2=11.60 B3=13.73	1998ERa (37958)	433

Medium: 75% v/v EtOH/H2O, 0.10 M KCl
In H2O, 0.10 M KCl: K1=4.97, B2=9.04, B3=10.8

Fe++	dis	NaClO4	25°C	0.10M	C			K1=5.2	1986SNa (37959)	434
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Method: rate of distribution of volatile ligand between aqueous phase and inert gas phase. K(H+L)=9.17 assumed.

Fe++	sp	non-aq	25°C	100%	U	M			1967BGb (37960)	435
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K(FeL2+py) > 4
K(FeL2py+py)=2.25
K(FeL2py2+py)=1.40

Medium:benzene

Fe++	gl	oth/un	30°C	0.0	U			K1=5.07 B2=8.67	1954IHa (37961)	436
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MEDIUM: 0 corr

Fe++	gl	diox/w	30°C	75%	U			K1=9.71 B2=18.19	1953UFb (37962)	437
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C5H9NO2 HL CAS 14401-90-2 (6205)
Pent-2,4-dione monoxime; CH3.CO.CH2.C(:NOH).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	alc/w	25°C	75%	U			K1=7.7 B2=12.90 K3=4.0	1986BTa (38472)	438

Medium: 75% MeOH/H2O, 0.1 M NaClO4

C5H9NO2 HL Proline CAS 147-85-3 (44)
Pyrrolidine-2-carboxylic acid; C4H8N.CO0H

Fe++	gl	KCl	20°C	1.0M	U			K1=4.07	1959PEc (38612)	439
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Fe++	gl	oth/un	20°C	0.02M	U			B2=8.3	1950ALa (38613)	440
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C5H9NO3 HL Hydroxyproline CAS 51-35-4 (416)
4-Hydroxy-2-pyrrolidinecarboxylic acid; C4H7N(OH)(COOH)

Fe++	gl	KCl	20°C	1.0M	U			K1=3.94	1959PEc (38730)	441
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C5H9NO4 H2L Glutamic acid CAS 56-86-0 (22)
2-Aminopentanedioic acid; H2N.CH(CH2.CH2.CO0H)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KN03	25°C	0.10M	M		K1=5.08	1981GVa (39078)	442
Fe++	gl	KCl	20°C	1.0M	U		K1=3.52	1959PEc (39079)	443
Fe++	gl	oth/un	20°C	0.01M	U		K1=4.6	1952ALa (39080)	444

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
Fe++	gl	NaClO4	25°C	0.50M	C	M	K1=6.18 B2=11.53 K(Fe(NO)+L)=6.86 K(Fe(NO)L+L)=4.63	2001SFa (39250)	445
Fe++	gl	KCl	25°C	0.10M	C		K1=6.71 B2=11.76 K(Fe+HL)=2.29	1986MDa (39251)	446
Fe++	gl	KN03	25°C	0.10M	U		K1=6.65	1977Tia (39252)	447
Fe++	gl	KCl	20°C	0.10M	U		K1=6.65 B2=12.02	1955Saa (39253)	448

C5H9NS2			HL				CAS 25769-03-3	(3623)	
Pyrrolidine-N-carboxydithioic acid; C4H8N-CSSH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	alc/w	25°C	75%	U		B3=12.69	1970PNa (39332)	449
Medium: 75% MeOH, 0.3 M NaClO4									

C5H9N3			L		Histamine		CAS 51-45-6	(103)	
4(5)-(2'-Aminoethyl)imidazole; C3H3N2.CH2.CH2.NH2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	.058M	U T		K1=5.80 B2=10.06	1961SMa (39535)	450
0 C: K1=6.05, K2=4.30; 45 C: K1=5.38, K2=3.98									
Fe++	gl	KN03	30°C	1.0M	U		K1=9.60 B2=16.09	1956HFb (39536)	451

C5H9N3O5			H2L				CAS 85594-21-4	(9125)	
2-(Acetylamino)-N,N'-dihydroxypropanediamide;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	vlt	KN03	25°C	0.10M	C			2004YYa (39581)	452
K1eff=8.03									

Method: square wave voltammetry. Medium pH 7.0.

C5H9N3S HL (1822)

2-Mercaptohistamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	25°C	0.10M	U		K1=5.40 B2=11.37	1977STc (39607)	453

C5H10N07P H4L PMIDA CAS 5994-61-6 (2433)

N-(Phosphonomethyl)iminodiethanoic acid; H2O3P.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=11.6 K(FeL+H)=5.45 K(FeHL+H)=3.6	2000SDa (39673)	454

Fe++	gl	NaCl	25°C	0.10M	U		K1=9.86 B2=13.20 B(FeHL)=15.27 B(FeH2L2)=28.51 B(FeH-1L)=-0.97	1993DLA (39674)	455
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C5H10N2O3 HL Glutamine CAS 56-85-9 (18)

2-Aminopentanedioic acid 5-amide; H2N.CH(CH2.CH2.CO.NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	25°C	3.00M	U		K1=4.43 B2=7.26	1973WIa (39816)	456

C5H11N L Piperidine CAS 110-89-4 (105)

Perhydropyridine; cyclo(-CH2.CH2.CH2.NH.CH2.CH2-) C5H11N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	non-aq	25°C	100%	U	M		1994STa (40446)	457
							K(FeA2B2+L=FeA2BL+B)=3.85 K(FeA2BL+L=FeA2L2+B)=2.18 K(FeB2C2+L=FeBC2L+B)=4.11 K(FeBC2L+L=FeC2L2+B)=2.38		

Medium: CH2Cl2. A=Dimethylglyoximediphenylborate, B=CH3CN, C=dmgdifluoro-borate, D=Pyridine

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
Fe++	gl	alc/w	30°C	5%	M		K1=6.91	1994RRb (40704)	458

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3.

Fe++	gl	KCl	20°C	1.0M	U	T	K1=3.39		1959PEc (40705)	459
Fe++	gl	oth/un	20°C	0.01M	U		B2=6.8		1950ALa (40706)	460

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
Fe++	gl	KCl	20°C	1.0M	U		K1=3.24		1959PEc (41090)	461
Fe++	gl	oth/un	20°C	0.01M	U		B2=6.7		1950ALa (41091)	462

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
Fe++	oth	NaClO4	35°C	0.10M	U		K1=8.80	B2=15.10	1998GAc (41258)	463
Method: electrophoresis. Medium: 0.10 M HClO4, 0.01 M H2L										

C5H11NS2		HL				CAS	147-84-2	(2126)		
Diethyldithiocarbamic acid; (CH3.CH2)2N.CSSH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	ISE	non-aq	25°C	100%	U		K1=7.5	B2=15.2	1984LSb (41350)	464
B3=19.7										
Medium: DMSO, 0.1 M NaClO4; Ag-electrode										
Fe++	sp	alc/w	25°C	75%	U				1970PNa (41351)	465
B3=11.34										
Medium: 75% MeOH, 0.3 M NaClO4										

C5H12N2O		L		Diethylurea		CAS	623-76-7	(2022)		
1,3-Diethylurea; (CH3.CH2.NH)2.CO										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	vlt	NaClO4	25°C	0.20M	U		K1=-0.40	B2=-0.10	1985MCc (41458)	466
K3=0.54										
K4=0.63										
K5=-0.15										

C5H12N2O2		HL		Ornithine		CAS	1069-31-4	(46)		
2,5-Diaminopentanoic acid; H2N.CH2.CH2.CH2.CH(NH2)COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

Fe++ gl KCl 20°C 1.0M U K1=3.09 1959PEc (41573) 467

Fe++ gl oth/un 20°C 0.01M U K1=5.0 1952ALa (41574) 468

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

Fe++ con mixed 25°C 20% C 1994SSb (42109) 469

K(FeC+L)=1.93

Medium:20% w/w propylene carbonate/ethylene carbonate.

FeC=ferrocene.

C6H4N4O HL CAS 900-47-0 (3083)

4-Hydroxypteridine;

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

Fe++ gl oth/un 20°C 0.01M U K1=3.4 B2=5.9 1954AHb (42278) 470

C6H4N4O2 H2L Lumazine CAS 487-21-8 (3084)

2,4-Dihydroxypteridine (2,4-Pteridinediol)

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

Fe++ gl oth/un 20°C 0.01M U K1=2.9 B2=5.6 1953ALa (42286) 471

C6H4O4 H2L CAS 615-94-1 (1280)

2,5-Dihydroxy-1,4-benzoquinone;

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

Fe++ gl KCl 30°C 25% M TIH K1=7.26 B2=13.30 1991GDe (42304) 472

Medium: 35% Dioxan/H2O, 0.1 M NaClO4. Other solvents and backgroundf concs.

C6H4O5 H2L Comenic acid CAS 499-78-5 (2544)

3-Hydroxypyran-4-one-6-carboxylic acid;

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

Fe++ sp oth/un 25°C 0.10M U B2=7.30 1974SNb (42318) 473

C6H5NO2 HL Picolinic acid CAS 98-98-6 (391)

2-Pyridine-carboxylic acid; C5H4N.CO0H

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

Fe++ gl NaClO4 35°C 1.00M U T K1=4.35 B2=8.95 1984PHa (42531) 474

B3=12.23

Fe++ gl NaClO4 30°C 0.10M U I K1=4.81 B2=8.39 1981RMa (42532) 475
K3=2.91

Fe++ gl NaNO3 20°C 0.10M U K1=4.90 B2=9.00 1960ANb (42533) 476
K3=3.30

Fe++ sp KNO3 25°C 0.20M U B3=11.30 1958BRa (42534) 477

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

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

Fe++ gl NaClO4 30°C 0.10M U I K1=3.40 B2=6.24 1981RMa (42833) 478

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

Fe++ gl NaClO4 30°C 0.05M U TIH K1=14.72 B2=25.62 1986NDa (42924) 479
I=0.1, 40 C: K1=13.07, B2=22.76; 50 C: K1=12.91, B2=22.45
I=0.1, 30 C:K1=13.53, B2=23.52; I=0.2, 30 C:K1=13.08, B2=23.02

C6H5NO4 HL CAS 78901-24-3 (885)
4-Hydroxypyridine-2-carboxylic acid N-oxide; C5H3N(O)(OH).COOH

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

Fe++ gl NaClO4 30°C 0.10M U I K1=3.67 B2=6.74 1981RMa (42969) 480

C6H6NO5P H3L CAS 145432-83-3 (7384)
6-Phosphonopyridine-2-carboxylic acid; HOOCC5H3N.PO3H2

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

Fe++ gl KNO3 25°C 0.10M C K1=8.70 B2=13.80 1998CMb (43221) 481
K(Fe(OH)2L+H)=10.77
K(Fe(OH)L+H)=9.09
K(FeL+H)=3.46
K(FeL2+H)=5.13
K(FeHL2+H)=3.83

C6H6N2O HL CAS 873-69-8 (1258)
Pyridine-2-aldoxime; C5H4N.CH:NOH

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

Fe++ gl KNO3 24°C 0.10M U K1=9.4 B2=17.40 1962BEa (43293) 482
K3=5.1

Fe++ sp oth/un 25°C .045M U T H 1962HIa (43294) 483

B3=24.85
K(FeL3+H)=7.13

B3=25.13(18 C),24.70(28.5 C),24.43(32.5 C). DH(B3)=-84 kJ mol⁻¹,DS=200
K=7.14(18 C),7.11(35 C); DH(K)=-3,DS=126.6. K'=3.33(33 C); DH(K')=4, DS=80

Fe++ sp oth/un ? ? U K1=3 1959IHa (43295) 484
K3=7.0

C6H6N2O L Nicotinamide CAS 98-92-0 (1473)
Pyridine-3-carboxylic acid amide, Vitamin PP, C5H4N.CO.NH2

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

Fe++ oth none 0°C ? U K1=1.00 B2=1.80 1971KAc (43341) 485
Method: freezing point depression

C6H6N2O2 HL (8281)
3-Hydroxy-2-amidocarboxypyridine, Hydroxypicolinamide;

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

Fe++ gl KNO3 25°C 0.10M C K1=5.24 B2= 9.48 1990ARa (43374) 486
K(FeL2+L)=4.08

C6H6N2O2 HL CAS 5657-61-4 (1430)
Nicotinyhydroxamic acid; C5H4N.CO.NH.OH

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

Fe++ sp KCl 25°C 0.50M C B2=17.20 1991LEc (43436) 487
B3=23.47
B(FeHL2)=20.03
B(FeH2L2)=22.51

C6H6N2O4 HL Methylorotic CAS 706-36-2 (2611)
3N-Methyl-2,4-dihydroxypyrimidine-6-carboxylic acid, methylorotic acid;

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

Fe++ gl NaCl 20°C 0.15M U K1=5.50 1979DZc (43473) 488
K(Fe+HL)=2.30

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

 Fe++ gl alc/w 30°C 5% M K1=7.98 1994RRb (43753) 489
 Medium: 5% v/v EtOH/H2O, 0.10 M KNO3.

Fe++ gl NaClO4 30°C 0.10M M TIH K1=13.89 B2=25.80 1986DNa (43754) 490
 Data for 0.05-0.20 M NaClO4. Extrap. to I=0.0, K1=14.50, B2=26.83.
 Data for 30-50 C. DH(K1)=-34.7 kJ mol-1.

Fe++ gl KNO3 25°C 1.0M U 1968TMa (43755) 491
 K(Fe+H2L=FeHL+H)=-5.71
 K(Fe+H2L=FeL+2H)=-14.332
 K(FeL+H2L=FeL2+2H)=-16.740

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++ gl NaClO4 30°C 0.10M M TIH 1986DNa (43958) 492
 K(Fe+HL)=12.88
 K(Fe+2HL)=23.66
 Data for 0.05-0.20 M NaClO4. Extrap. to I=0.0, K(Fe+HL)=13.01,
 K(Fe+2HL)=24.25. Data for 30-50 C. DH(Fe+HL)=-29.4 kJ mol-1.

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
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Fe++ gl NaClO4 30°C 0.05M U TIH K1=13.83 B2=24.30 1986NDa (44425) 493
 I=0.1, 40 C: K1=13.95, B2=25.00; 50 C: K1=13.70, B2=24.61
 I=0.1, 30 C:K1=14.30, B2=25.66; I=0.2, 30 C:K1=14.80, B2=26.43

C6H6O9 H4L Ditartronic ac (8108)
 Di(2-Propene-1,3-dioic acid)ether;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++ gl KCl 25°C 0.10M C K1=4.41 1984MMg (44536) 494
 K(FeL+H)=3.22

Fe++ gl KCl 25°C 0.10M C K1=4.41 1984MMg (44537) 495
 K(FeL+H)=3.22

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++ vlt non-aq 25°C 100% U M 1978KBb (44609) 496

K(FeA+L)=1.35
K(FeA+2L)=2.30

Medium: DMSO. A=Phthalocyanine

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	vlt	non-aq	20°C	100%	U	M		K(FeA+L)=3.08 K(FeA+2L)=4.64	1978KBb (44699)	497

Medium: DMSO. A=Phthalocyanine

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	vlt	non-aq	20°C	100%	U	M		K(FeA+L)=4.04 K(FeA+2L)=5.87	1978KBb (44821)	498

Medium: DMSO. A=Phthalocyanine

Fe++	vlt	non-aq	20°C	100%	U				1978KBb (44822)	499
								K(Fe(phthalocyanine)+L)=1.42		

Medium: DMSO

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	none	20°C	0.0	U			K1=3.66 B2=6.34	1961PEb (44927)	500
Fe++	gl	none	20°C	0.0	U			K1=8.0	1959SIb (44928)	501

C6H7NO L CAS 7295-76-3 (3095)
3-Methoxypyridine; C5H4N.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	kin	NaClO4	25°C	0.10M	U			K(Fe(CN)5(H2O)+L)=5.25	1998Cwa (44992)	502

Medium: 0.1 M LiClO4, pH=5

C6H7NO L CAS 620-08-6 (3096)
4-Methoxypyridine; C5H4N.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Medium: 0.1 M LiClO₄, pH=7.

C6H7NO4S HL (3122)
3-Amino-4-hydroxybenzenesulfonic acid; (HO)(H2N)C6H3.SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ gl none 20°C 0.0 U K1=3.32 B2=6.13 1961PEb (45083) 504

C6H7N3O L CAS 1452-63-7 (3097)
Pyridine-2-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ gl oth/un 20°C 0.01M U K1=8.4 1956ARd (45100) 505

C6H7N3O4 H2L CAS 54784-33-7 (6082)
1,3-Dimethyl-5-nitroso-barbituric acid; 1,3-Dimethylvioluric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ gl NaNO3 25°C 0.50M C B3=10.25 1984HNb (45151) 506

Fe++ gl NaNO3 25°C 0.50M C 1977VNa (45152) 507
B3=10.25

C6H8N2 L 2-Picolylamine CAS 29722-36-9 (502)
2-(Aminomethyl)pyridine; C5H4N.CH2NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ cal NaCl 25°C 0.15M C H K1=4.105 B2=7.441 1987ENa (45353) 508
B3=10.116

DH(K1)=-24.6 kJ mol⁻¹, DS=-4 J K⁻¹ mol⁻¹; DH(B2)=-44, DS=-6; DH(B3)=-86, DS=-96

Fe++	gl	oth/un	30°C	->0	U	K1=3.82	B2=7.16	1959GFa (45354)	509
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C6H8N4B- L (7237)
Bis(pyrazol-1-yl)borate; (C3H3N2)2BH2-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ dis non-aq 25°C 100% U 1996KSA (45438) 510
K(Fe+2HL=FeL2(org)+2H)=-3.96

By solvent extraction into CHCl_3

C6H8O2 HL CAS 765-70-8 (8322)
3-Methylcyclopentane-1,2-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	alc/w	30°C	5%	M	M	K1=6.74 B2=11.92 K(Fe(bpy)+L)=7.31 K(FeA+L)=5.89 K(FeB+L)=4.82 B(Fe(ala)L)=14.21	1994RRb (45453)	511

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. B(Fe(val)L)=14.08, B(Fe(en)L)=11.54
H2A is oxalic acid; H2B is catechol.

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
Fe++	gl	KNO3	30°C	0.10M	C	M	K(Fe(phen)+L)=7.98 K(Fe(bpy)+L)=8.12 K(Fe(en)+L)=6.35 K(Fe(baea)+L)=5.98	1984BPc (45636)	512

K(Fe(dipropylenetriamine)+L) = 5.34; baea=bis(aminoethyl)amine

Fe++	EMF	NaClO4	20°C	1.00M	U		K1=-0.27 B2=1.54	1981MOc (45637)	513
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Ascorbic acid treated as HL. Antimony electrode used

Fe++	gl	NaClO4	37°C	0.15M	C		K1=7.09	1974CCa (45638)	514
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Fe++	gl	NaClO4	25°C	3.00M	C		B(FeHL)=0.21 K(Fe+HL=FeL+H)-6.58	1974UWa (45639)	515
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C6H8O6S H3L CAS 99-68-3 (3692)
(Carboxymethylthio)butanedioic acid; HOOC.CH(S.CH2.COOH).CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.05M	M		K1=6.75	1975DPb (45694)	516

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
Fe++	gl	NaCl	25°C	1.0M	C		K1=3.33 B2= 6.27 B(FeHL)=7.478 B(FeHL2)=10.60	2000KKc (46087)	517

B(FeH-1L2)=-0.86									
Fe++	nmr	none	25°C		U	M		1990GKc (46088)	518
K(Fe+H3L=FeH2L+H)=1.61									
Fe++	gl	KNO3	37°C	0.15M	C		K1=4.56 B(FeHL)=8.72 B(FeH2L)=11.2 B(FeHL2)=12.2 B(Fe2H-2L2)=-5.4	1979ADb (46089)	519
Fe++	EMF	KNO3	25°C	0.10M	U		K1=4.80 B(FeHL)=8.62	1974FMa (46090)	520
Fe++	gl	NaClO4	20°C	0.10M	U		K1=4.4 K(Fe+HL)=2.65	1964TIb (46091)	521
Fe++	gl	NaClO4	25°C	1.0M	U		K1=3.08 K(Fe+HL)=2.12 K(FeH-1L= FeH-2L+H)=3.0	1954HSa (46092)	522

C6H9NO6		H3L		CAS 41035-84-1 (4367)					
N-Carboxymethyl-L-aspartic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.1M	U		K1=7.80 B2=14.20 B(FeHL)=12.24 B(Fe(OH)L)=5.87	2002KNa (46376)	523
Fe++	gl	KCl	25°C	1.0M	C		K1=7.66 K(Fe+HL)=2.72 K(Fe+H2L)=2.70 K(Fe+OH+L)=14.39 K(Fe+2OH+L)=11.38	1979MBg (46377)	524

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
Fe++	oth	NaClO4	35°C	0.10M	U	M	K1=9.97 K(FeL+A)=5.06	1998GAc (46799)	525
Method: electrophoresis. Medium: 0.10 M HClO4, 0.01 M H2L H2A: penicillamine									
Fe++	gl	KCl	25°C	0.10M	U		K1=8.90 B2=11.98 *K(FeL(H2O))=-10.82	1994MMd (46800)	526
Fe++	gl	KCl	25°C	1.0M	C		K1=8.05 B2=11.53	1987MIa (46801)	527

Fe++ vlt oth/un 20°C 0.20M U T K2=4.0 1971BFa (46802) 528
K(Fe+HL)=1.0
B2(10 C)=4.30; 40 C=3.95. K(Fe+HL)(10 C)=1.0; 40 C, =2.2

Fe++ gl KCl 20°C 0.10M U T K1=8.83 1955SAa (46803) 529

Fe++ EMF KCl 20°C 0.10M U T K1=8.84 1951SFa (46804) 530
Method: H electrode

Fe++ EMF KCl 20°C 0.10M U K1=8.82 1951SHa (46805) 531
K(FeLOH+H)=10.6
Method: H electrode

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

Fe++ kin oth/un 25°C 0.10M U H 1978TMa (47551) 532
K(Fe(CN)5+L)=5.77
Medium: LiClO4. For N1 isomer. DH=-40.9 kJ mol-1, DS=-25 J K-1 mol-1.
For N3 isomer, K=3.46, DH=-26.7, DS=-21

Fe++ gl none 21°C 0.0 M K1=5.25 B2=9.69 1974YAa (47552) 533

Fe++ gl NaClO4 25°C 3.00M U T K1=5.88 B2=10.43 1970WIA (47553) 534

Fe++ gl KNO3 15°C 0.20M U T K1=5.39 B2=8.74 1969RMb (47554) 535
K1(40 C)=5.28, K2(40 C)=3.22

Fe++ gl KCl 25°C .058M U T K1=5.85 B2=10.15 1961SMa (47555) 536
0 C, K1=6.65, K2=4.70; 45 C, K1=5.42, K2=4.74

Fe++ gl oth/un 20°C 0.01M U B2=9.3 1952ALa (47556) 537

C6H9N3O2S H2L Thiolhistidine CAS 13552-61-9 (5659)
1-Amino-2-(2-Mercaptoimidazole)-propionic acid;

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

Fe++ gl NaClO4 25°C 0.10M U K1=5.80 B2=11.11 1982TSb (47639) 538

C6H10N2O2 HL Nioxime CAS 492-99-9 (1098)
Cyclohexane-1,2-dione-dioxime; C6H8(:NOH)2

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

Fe++ vlt alc/w 25°C 10% U K1=9.03 B2=17.29 1974ANb (47705) 539

C6H1004S H2L CAS 111-17-1 (139)
3,3'-Thiodipropionic acid; HOOC.CH2.CH2.S.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.05M	M			K1=4.15	1975DPb (48181)	540

C6H1004S2 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
Fe++	gl	NaClO4	25°C	0.10M	U			K1=2.73 K(Fe+HL)=2.03	1971PPb (48241)	541

C6H1006 H2L CAS 23243-68-7 (242)
1,2-Bis(carboxymethoxy)ethane; HOOC.CH2.O.CH2.CH2.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	U			K1=2.35	1975MTc (48339)	542

C6H1007 HL Galacturonic CAS 685-73-4 (290)
D-Galacturonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	vlt	NaClO4	25°C	0.10M	U			K1=3.09 B2=5.58	1990DGa (48388)	543
Fe++	gl	NaClO4	25°C	1.0M	U			K1=3.09 B2= 5.58	1989DGa (48389)	544
Fe++	gl	NaClO4	37°C	0.15M	C			K1=9.7 B2=18.3	1974CCa (48390)	545

C6H11N04 H2L CAS 5336-17-4 (345)
N-Ethyliminodiethanoic acid; C2H5.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.10M	C			K1=6.72 B2=11.68	1986MDa (48601)	546

C6H11N04S H3L CAS 58033-48-5 (3124)
N-2-Mercaptoethyliminodiethanoic acid; HS.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KCl	20°C	0.10M	U			K1=11.72 K(Fe+HL)=5.87	1955SAa (48611)	547

C6H11N05 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
Fe++	EMF	KCl	20°C	0.10M	U		K1=6.78 B2=10.00	1955SAa (48725)	548

C6H12N2O4		H2L		EDDA			CAS 5657-17-0	(119)	
1,2-Diaminoethane-N,N'-diethanoic acid; HOOC.CH2.NH.CH2.CH2.NH.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	1.0M	C		K1=8.63 B2=10.67	1987MIa (49238)	549

C6H12N2O4		H2L		N,N-EDDA			CAS 5835-29-0	(2333)	
1,2-Diaminoethane-N,N-diethanoic acid; H2N.CH2.CH2.N(CH2.COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	20°C	0.10M	U		K1=9.81 B2=13.67	1955SAa (49300)	550
K(Fe+HL)=3.84									

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
Fe++	gl	KCl	20°C	1.0M	U	T	K1=3.42	1959PEc (50073)	551

C6H13NO2		HL		Norleucine			CAS 616-06-8	(602)	
2-Aminohexanoic acid (2-Aminocaproic acid) CH3.(CH2)3.CH(NH2).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		B2=8.6	1950ALa (50178)	552

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
Fe++	oth	KNO3	20°C	0.10M	U		K1=5	1965JMa (50359)	553
Method: paper electrophoresis									
Fe++	gl	KCl	30°C	0.10M	U		K1=4.31 B2=7.31	1953CCa (50360)	554

C6H14N2O		L					(2357)		
1-Oxa-4,7-diazacyclononane; Cyclo(-((CH2)2.NH)2(CH2)2.O.-)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	U		K1=5.00	1990CCa (50712)	555

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	oth/un	20°C	0.01M	U		K1=4.5	1952ALa (50822)	556
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C6H14N2O2 HL CAS 69749-17-3 (1546)
 2-Amino-N-hydroxyhexanamide; CH3.(CH2)3.CH(NH2).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	KCl	25°C	0.50M	U		B2=23.29	1991LEb (50851)	557
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B(FeHL)=17.36

B(FeH2L2)=32.95

B(FeHL2)=29.31

B3=27.77

B(FeHL3)=35.66, B(FeH2L3)=41.98, B(Fe(OH)L2)=15.98

C6H14N2O3 HL 5-Hydroxylysine CAS 13204-98-3 (1585)
 2,6-Diamino-5-hydroxyhexanoic acid; H2N.CH2.CH(OH).CH2.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	NaClO4	25°C	0.10M	U		K1=3.1	1965Nca (50871)	558
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C6H14N2S L (5635)

1-Thia-4,7-diazacyclononane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	NaNO3	25°C	0.10M	U		K1=5.9 B2=12.00	1987HDa (50889)	559
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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
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Fe++	gl	oth/un	25°C	?	U T		K1=2.86	1960PEd (51006)	560
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K1=3.29(17 C)

Fe++	gl	oth/un	20°C	0.01M	U		K1=3.20	1952ALa (51007)	561
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C6H15NO3 Triethanolamine CAS 102-71-6 (447)
 Tris-(2-hydroxyethyl)amine; L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++		oth oth/un	25°C	0.43M	U		K1=2.27 B2=3.59	1966Ske (51289)	562
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Medium: CH₂OHCH₂.NH₃NO₃

C6H₁₅NS HL CAS 1942-52-5 (2595)

2-(Diethylamino)ethanethiol; (CH₃.CH₂)₂N.CH₂.CH₂.SH

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

Fe++ gl NaClO₄ 20°C 0.10M U TI K₁=12.00 B₂=19.06 1986NDb (51353) 563

C6H₁₅N₃ L CAS 4730-54-5 (26)

1,4,7-Triazacyclononane; cyclo(-NH.CH₂.CH₂.NH.CH₂.CH₂.NH.CH₂.CH₂-)

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

Fe++ gl KNO₃ 20°C 0.10M U T H K₁=14.51 B₂=20.93 1997BAa (51408) 564
At 32 C, K₁=13.75. DH(K₁)=-106.9 kJ mol⁻¹. DS(K₁)=351 J K⁻¹ mol⁻¹.

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

Fe++ gl KCl 25°C 0.20M C 2002ECa (51425) 565
B(FeHL)=14.92

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

Fe++ gl KNO₃ 25°C 0.10M C K₁=6.40 B₂=11.18 1998GMA (51450) 566

C6H₁₅O₃P L CAS 122-52-1 (1723)

Triethylphosphite; (C₂H₅)₃P

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

Fe++ sp non-aq 23°C 100% U M 1980ELa (51511) 567
K(FeA+L)=3.24

Medium: toluene. A= "Capped" porphyrin.

C6H₁₈N₄ L Trien-tetramine CAS 112-24-3 (11)

1,4,7,10-Tetraazadecane; H₂N.CH₂.CH₂.NH.CH₂.CH₂.NH.CH₂.CH₂.NH₂

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

Fe++ gl KCl 25°C 1.0M C K₁=7.12 1987MIa (52097) 568

Fe++ cal KCl 25°C 0.10M U H 1961SPb (52098) 569

DG(K₁)=-43.89 kJ mol⁻¹, DH(K₁)=-25.3, DS=62.8 J K⁻¹ mol⁻¹

Fe++ gl KCl 40°C 1.30M U T H 1952JHa (52099) 570

B(Fe3L2)=3.70

B(Fe3L2)=3.92(30C), DH=-38 kJ mol⁻¹. At 35 C: DH(K1)=-38

Fe++ gl oth/un 30°C 1.0M U T K1=8.31 1952JHa (52100) 571

40 C: K1=8.08

Fe++ gl KCl 20°C 0.10M U K1=7.8 1950SCa (52101) 572

C6H18N4 L Tren CAS 4097-89-6 (817)

2,2',2''-Triaminotriethylamine; (H2N.CH2.CH2)3N

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

Fe++ cal KCl 25°C 0.10M U H 1960PCa (52196) 573

DG(K1)=-49.53 kJ mol⁻¹, DH=-26.4, DS=-77 J K⁻¹ mol⁻¹

Fe++ gl KCl 20°C 0.10M U K1=8.8 1950PSa (52197) 574

C7H5N L Cyanobenzene CAS 100-47-0 (4406)

Cyanobenzene, benzonitrile; C6H5.CN

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

Fe++ sp non-aq 25°C 100% U M 1994STa (52568) 575

K(FeA2B2+L=FeA2BL+B)=-1.70

K(FeA2BL+L=FeA2L2+B)=-3.48

K(FeC2B2+L=FeC2BL+B)=-2.23

K(FeC2BL+L=FeC2L2+B)=-4.00

Medium: CH2Cl2. A=Dimethylglyoximediphenylborate, B=Pyridine, C=Dimethyl-
difluoroborate

C7H5N04 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

Fe++ gl NaCl04 25°C 1.00M U T K1=1.42 1984PHa (52625) 576

Fe++ sp oth/un 15°C 0.10M U K1=3.2 B2=3.8 1963MSa (52626) 577

K1 measured in the presence of 0.02 M KCN

C7H5N04 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

Fe++ gl oth/un 25°C dil U K1=4.84 B2=8.10 19700Ma (52652) 578

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
Fe++	gl	oth/un	25°C	dil	U		K1=5.91 B2=9.32 B3=10.60	19700Ma (52667)	579

Fe++	sp	oth/un	15°C	0.10M	U		K1=3.4 B2=3.8	1963MSa (52668)	580
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K1 measured in the presence of 0.02 M KCN

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
Fe++	gl	NaCl04	25°C	1.00M	U T		K1=6.65 B2=10.78	1984PHa (52769)	581

Fe++	sp	oth/un	15°C	0.10M	U		K1=3.3 B2=3.6	1963MSa (52770)	582
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K1 measured in the presence of 0.02 M KCN

Fe++	gl	NaNO3	20°C	0.10M	U		K1=5.71 B2=10.36	1960ANb (52771)	583
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C7H5NO4 H2L Cinchomeronic CAS 490-11-9 (2852)
 3,4-Pyridinedicarboxylic acid, Cinchomeronic acid; C5H3N.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	15°C	0.10M	U		B2=5.0 B3=4.9	1963MSa (52841)	584

B2 measured in the presence of 0.02 M KCN

C7H5N3O HL CAS 35252-03-0 (3142)
 2-Hydroxypyrido[3',4'-b]pyrazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=5.4 B2=9.9	1954AHb (53089)	585

C7H6NO2Cl HL CAS 7120-43-6 (3782)
 5-Chloro-2-hydroxybenzaldehyde oxime (5-chlorosalicylaldoxime)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	20°C	75%	U		K1=8.2 B2=14.60	1965BEb (53387)	586

Medium: 75% dioxan, 0.1 M NaCl04

C7H6NO3Br H2L CAS 87353-69-3 (207)
 4-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	EMF	diox/w	30°C	50%	U		K1=6.90	1977DJa (53395)	587
Medium: 50% dioxan, 0.1 M NaClO4									

C7H6NO3Br		H2L					CAS 5798-94-7	(206)	
5-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	EMF	diox/w	30°C	50%	U		K1=7.92	1977DJa (53406)	588
Medium: 50% dioxan, 0.1 M NaClO4									

C7H6NO3Cl		H2L					(205)		
3-Chlorosalicylhydroxamic acid; Cl.C6H3(OH).CO.NH.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	EMF	diox/w	30°C	50%	U		K1=6.81	1977DJa (53415)	589
Medium: 50% dioxan, 0.1 M NaClO4									

C7H6N2O4		HL					CAS 1595-15-9	(3754)	
2-Hydroxy-5-nitrobenzaldehyde oxime (5-nitrosalicylaldoxime)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	20°C	75%	U		K1=6.9 B2=12.50	1965BEb (53492)	590
Medium: 75% dioxan, 0.1 M NaClO4									

C7H6N2O4		H2L					CAS 2683-49-0	(3753)	
4-Aminopyridine-2,6-dicarboxylic acid (4-aminodipicolinic acid)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KN03	20°C	0.10M	U		K1=6.68 B2=12.53	1965ABa (53507)	591

C7H6N2O5		H2L					CAS 831-51-6	(208)	
5-Nitrosalicylhydroxamic acid; O2N.C6H3(OH).CO.NH.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	EMF	diox/w	30°C	50%	U		K1=5.63	1977DJa (53522)	592
Medium: 50% dioxan, 0.1 M NaClO4									

C7H6O5		HL					CAS 98-91-9	(6294)	
Thiobenzoic acid; C6H5.COSH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	30°C	60%	U		K1=4.3 B2=8.1	19720Tc (53555)	593

Medium: 60% v/v dioxan, 1 M (K,Na)NO₃

C7H6O2 HL Salicylaldehyde CAS 90-02-8 (193)

2-Hydroxybenzaldehyde, Salicylaldehyde; HO.C6H4.CHO

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

Fe++ gl diox/w 25°C 50% U K1=4.22 B2=7.62 1949MMa (53620) 594

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

2-Mercaptobenzoic acid; HS.C6H4.COOH

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

Fe++ gl alc/w 50°C 45% U T H K1=5.72 B2=10.34 1968RSh (53904) 595

Medium: 45% EtOH, 0.15 M. K1=5.45(30 C), 5.57(40 C); K2=4.41(30 C), 4.48(40 C).

DH(K1)=21.3 kJ mol⁻¹(25 C), DS=175 J K⁻¹ mol⁻¹; DH(K2)=12.9, DS=130

C7H6O2S2 H2L CAS 89677-36-1 (5448)

3-(2-Thiophene)-2-mercaptopropenoic acid; C4H3S.CH:C(SH).COOH

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

Fe++ gl diox/w 25°C 0.10M U K1=8.23 B2=14.73 1977WVa (53930) 596

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

Fe++ cal alc/w 25°C 100% U H 1990PJa (54194) 597

Medium: MeOH. DG(K1)=-27.4 kJ mol⁻¹, DH=-4.1; DG(B2)=-47.5; DH=-32.3

Fe++ gl alc/w 25°C 100% M 1988LTa (54195) 598

K(Fe+HL)=4.8

K(Fe+2HL)=8.3

Medium: MeOH

Fe++ gl KCl 20°C 0.10M U K1=6.55 B2=11.25 1958PEe (54196) 599

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

Fe++ sp diox/w 25°C 20% U I M K1=5.85 B2=11.35 1988SIc (54974) 600

B(FeLA)=13.10

In 0.1 M NaClO₄. In 50% EtOH/H₂O, K1=5.10, K2=4.70, B(FeLA)=11.75

A=Alizarin maroon

Fe++ gl KCl 20°C 0.10M U K1=5.90 B2=9.9 1958PEe (54975) 601

C7H7NO2 H2L Salicylaldoxime CAS 94-67-7 (1486)
2-Hydroxybenzaldehyde oxime; HO.C6H4.CH:N.OH

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

Fe++ gl diox/w 20°C 75% U 1965BEb (55308) 602
K(Fe+HL)=9.38
K(FeHL+HL)=7.35

Medium: 75% dioxan, 0.1 M NaClO4

C7H7NO2 HL CAS 3222-47-7 (3154)
6-Methylpyridine-2-carboxylic acid; CH3.C5H3N.CO0H

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

Fe++ gl NaNO3 20°C 0.10M U K1=4.10 B2=7.50 1960ANb (55428) 603
K3=2.7

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

Fe++ gl diox/w 37°C 30% C M B2=8.74 1983MAd (55496) 604
B(Fe(bpy)L)=9.42

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

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

Fe++ EMF diox/w 30°C 50% U K1=7.74 1977DJa (55593) 605
Medium: 50% dioxan, 0.1 M NaClO4

C7H7NO3 HL CAS 548-93-6 (3156)
3-Hydroxyanthranilic acid (2-Amino-3-hydroxybenzoic acid)

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

Fe++ gl oth/un 20°C 0.0 U K1=3.8 B2=8.3 1961PEb (55626) 606

Fe++ gl oth/un 20°C ? U K1=7.7 1959SIb (55627) 607

C7H7NO3 HL CAS 1197-10-0 (3759)
6-(Hydroxymethyl)pyridine-2-carboxylic acid; HO.CH2.C5H3N.CO0H

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

Fe++ gl oth/un 25°C ? U K1=3.91 B2=7.13 1962G0a (55650) 608

C7H7NO4 HL CAS 17209-50-6 (886)
4-Methoxypyridine-2-carboxylic acid N-oxide; C5H3N(O)(OCH3).COOH

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

Fe++ gl NaClO4 30°C 0.10M U I K1=3.88 B2=7.10 1981RMa (55662) 609

C7H7N3O2 H2L CAS 4463-97-2 (1654)
2,6-Pyridinedialdoxime; C5H3N.(CH:NOH)2

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

Fe++ gl KCl 25°C .025M U K1=5.380 1977HMa (55739) 610
K(FeH3L+H)=2.523
K(FeH2L+H)=4.481
K(FeHL+H)=4.899
K(FeL+H)=7.211

Fe++ sp oth/un 25°C 0.0 U H 1965HIa (55740) 611
K(FeL2+H)=7.40
K(FeHL2+H)=5

DH(FeL2+H)=0 kJ mol⁻¹, DS=142 J K⁻¹ mol⁻¹

C7H8N2O HL CAS 5451-39-8 (3157)
2-Acetylpyridine oxime; C5H4N.C(:N.OH).CH3

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

Fe++ sp KCl 28°C 0.50M U B2=12.73 1960BTb (55798) 612

C7H8N4 L (2641)
4,4'-(5,5')-Bisimidazolylmethane; C3H3N2.CH2.C3H3N2

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

Fe++ gl KNO3 30°C 0.16M U K1=4.47 B2=8.37 1965DFa (55965) 613
sulphate present; slightly low?

C7H8N4S L CAS 3608-75-1 (1799)
2-Pyridinecarboxaldehyde thiosemicarbazone; C5H4N.CH:N.NH.CS.NH2

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

Fe++ sp oth/un 25°C 0.10M U 1975LMb (56022) 614
B(FeH3L2)=44.9
B(FeH2L3)=41.7
B(FeHL3)=38.4
B3=34.2

C7H9N L 2,4-Lutidine CAS 108-37-4 (319)
2,4-Dimethylpyridine; C5H3N.(CH3)2

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

Fe++ vlt non-aq 20°C 100% U M 1978KBb (56199) 615
K(FeA+L)=1.43
K(FeA+2L)=1.70

Medium: DMSO. A=Phthalocyanine

C7H9N L 2,6-Lutidine CAS 108-44-1 (723)
2,6-Dimethylpyridine; C5H3N.(CH3)2

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

Fe++ vlt non-aq 20°C 100% U M 1978KBb (56221) 616
K(FeA+L)=1.66
K(FeA+2L)=1.95

Medium: DMSO. A=Phthalocyanine

C7H9N L 3,4-Lutidine CAS 583-58-4 (2056)
3,4-Dimethylpyridine; C5H3N.(CH3)2

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

Fe++ sp non-aq 23°C 100% U M 1980ELa (56258) 617
K(FeA+L)=2.26

Medium: toluene. A= "Capped" porphyrin.

C7H9N L 3,5-Lutidine (323)
3,5-Dimethylpyridine; C5H3N.(CH3)2

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

Fe++ sp alc/w 25°C 8% U I 1976BBa (56287) 618
K(Fe(CN)5py+L=FeX5L+py)=-0.008

Medium: 8% MeOH/H2O (0.047 mol fraction). Data also for 0.10, 0.16, 0.23 mf.
MeOH/H2O. Data also for EtOH/H2O, t-BuOH/H2O, and glycerol/H2O mixtures

C7H9N03S2 HL (940)
2-(Thiophene-2-aldimino)ethane sulfonic acid; C4H3S.CH:N.CH2.CH2.S03H

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

Fe++ gl NaCl04 25°C 0.10M U K1=4.63 B2=8.41 1982MSa (56457) 619

C7H9N302S2 L (6945)
1-Ethoxycarbonyl-3-thiazole-2-ylthiourea; C3H2NS.NHCSNHC00C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	alc/w	25°C	60%	U		K1=6.21	1994KEa (56501)	620
Medium: 60 % EtOH/H2O, 0.1 M NaNO3									

C7H10N2		L					CAS 42088-91-5	(3134)	
2-(Methylaminomethyl)pyridine (2-Picolylmethylamine)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	30°C	->0	U		K1=3.53 B2=6.26	1959GFa (56612)	621

C7H11N06P2		H4L					CAS 4712-06-5	(4470)	
Amino(phenyl)methylenediphosphonic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.10M	U		K1=10.40 K(Fe+HL)=7.37 B(Fe2L)=15.62	1969DMd (56941)	622

C7H12N2O2		H2L		Heptoxime			CAS 530-97-2	(1304)	
1,2-Cycloheptanedione dioxime; C7H10(:NOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	20°C	75%	U		K1=13.22 B2=24.65	1981HFa (57067)	623

Fe++	gl	NaClO4	20°C	0.10M	C		K(Fe+HL)=10.46 K(Fe+2HL)=20.01	1980MHa (57068)	624

C7H13N04		H2L					CAS 16578-07-5	(341)	
N-Propyliminodiethanoic acid; CH3.CH2.CH2.N(CH2.COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.10M	C		K1=6.59 B2=11.88 B(FeL(OH))=11.28	1986MDa (57529)	625

C7H13N04S		H2L					(3184)		
N-(2-Methylthioethyl)iminodiethanoic acid; CH3.S.CH2.CH2.N(CH2.COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	EMF	KCl	20°C	0.10M	U		K1=7.12 B2=10.72	1955SAa (57546)	626
Method: H electrode									

C7H13N05		H2L					CAS 62117-07-1	(3171)	
N-(2-Methoxyethyl)iminodiethanoic acid; CH3.O.CH2.CH2.N(CH2.COOH)2									

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe++      EMF KCl      20°C 0.10M U      K1=6.81  B2=10.73  1955SAa (57574) 627
Method: H electrode

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*****
C7H14N2O2      HL      CAS 111652-03-0 (8138)
Azetidine-1-(2-aminobutanoic acid);
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe++      gl  KNO3      25°C 0.10M C      K1=5.8      1989ARa (57700) 628
*****
C7H21N2O10P3      H6L      (7004)
N-(2-Hydroxyethyl)-1,2-diaminoethane-N,N'-trimethylenephosphonic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe++      gl  KCl      25°C 0.10M U      K1=12.84      1974KRd (58372) 629
                        K(Fe+HL)=9.04
                        K(Fe+H2L)=4.49
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C8H5NO2      HL      Isatin      CAS 91-56-5 (7844)
2,3-Indolinedione;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe++      gl  alc/w  30°C  5%  M      M      K1=8.94  B2=16.19  1994RRb (58409) 630
                        K(Fe(bpy)+L)=9.22
                        K(FeA+L)=7.55
                        K(FeB+L)=6.65
                        B(Fe(ala)L)=16.12

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Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. B(Fe(val)L)=15.98, B(Fe(en)L)=13.46
H2A is oxalic acid; H2B is catechol.

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*****
C8H5NO3      L      CAS 524-38-9 (8323)
N-Hydroxyphthalimide;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe++      gl  alc/w  30°C  5%  M      M      K1=4.90  B2= 8.95  1994RRb (58423) 631
                        K(Fe(bpy)+L)=5.66
                        K(FeA+L)=4.38
                        K(FeB+L)=3.85
                        K(FeL+ala)=7.63

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Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. K(FeL+val)=7.52, B(Fe(en)L)=9.89
H2A is oxalic acid; H2B is catechol.

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*****
C8H5NO6      H3L      CAS 536-20-9 (3813)
Pyridine-2,4,6-tricarboxylic acid; C5H2N(COOH)3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	15°C	0.10M	U		K1=2.2 B2=3.7	1963MSa (58450)	632
K1 measured with 0.02 M KCN									

C8H6N2O		HL					CAS 5423-54-1	(3217)	
4-Hydroxy-1,5-naphthyridine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=5.8 B2=10.7	1954AHb (58737)	633

C8H6N2O		HL					CAS 17056-99-4	(3220)	
5-Hydroxyquinoxaline;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=6.8	1954AHb (58746)	634

C8H6N2O		HL					CAS 17057-00-0	(3218)	
8-Hydroxy-1,6-naphthyridine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=5.9 B2=10.5	1954AHb (58752)	635

C8H6N2O		HL					CAS 70730-36-8	(3219)	
8-Hydroxy-1,7-naphthyridine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=6.2 B2=11.7	1954AHb (58757)	636

C8H6N2O		HL					(6290)		
8-Hydroxycinnoline, (2-Hydroxybenzo)pyrimidine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.10M	U		K1=6.7	1954AHb (58767)	637

C8H6N2O		HL				8-Quinazolinol	CAS 7757-02-2	(3221)	
8-Hydroxyquinazoline;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=6.6 B2=12.2	1954AHb (58777)	638

C8H6N2S		L					(3814)		
2-(2'-Pyridyl)-1,3-thiazole;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	25°C	0.10M	U		K1=2.7 B2=6.0 B3=8.8	1968EHa (58794)	639

Medium: NH2OH.HCl, pH=2.9

 C8H6N2S L CAS 53911-41-4 (3815)
 4-(2'-Pyridyl)-1,3-thiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	25°C	0.10M	U		K1=4.06 B2=7.10 B3=12.61	1968EHa (58802)	640

 C8H6N4 L CAS 10199-00-5 (3791)
 2,2'-Bis(1,3-diazine) (2,2'-bipyrimidine); C4H3N2.C4H3N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	NaCl	?	0.20M	U		B3=7.53	1963BMa (58810)	641

 C8H7NO4 HL CAS 24195-03-7 (4498)
 4-Methylpyridine-2,4-dicarboxylic acid,4-methyl ester; CH3.C5H2N(COOH)(COOCH3)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	25°C	dil	U		K1=3.75 B2=6.51	19700Ma (59145)	642

 C8H7NO4 HL CAS 17848-79-2 (4499)
 5-Methylpyridine-2,5-dicarboxylic acid, 5-methyl ester; CH3.C5H2N(COOH)(COOCH3)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	25°C	dil	U		K1=3.82 B2=6.08	19700Ma (59148)	643

 C8H7N3 L CAS 18653-75-3 (3792)
 2-(2'-Pyridyl)imidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	EMF	KNO3	25°C	0.10M	U		K1=4.097 B2=7.90 B3=11.600	1967EHc (59183)	644

 C8H7N3 L CAS 16576-78-6 (3793)
 4-(2'-Pyridyl)imidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++ gl KNO3 25°C 0.10M U K1=4.93 B2=9.02 1967EHb (59190) 645
B3=13.76

C8H8N4 L Hydralazine CAS 86-54-4 (3197)

1-Hydrazinophthalazine;

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

Fe++ gl NaCl 37°C 0.15M U B2=7.824 1984AMb (59402) 646
B3=11.651

Fe++ gl oth/un 22°C 0.10M U K1=4.9 B2=9.5 1957FEa (59403) 647
B3=13.8

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

Fe++ sp NaClO4 30°C 0.10M U K1=2.18 B2=3.60 1975KAd (59828) 648

C8H8O3 HL CAS 673-22-3 (3194)

4-Methoxysalicylaldehyde; CH3O.C6H3(OH).CHO

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

Fe++ gl diox/w 30°C 75% U K1=4.30 B2=7.55 1967KBb (59979) 649
Medium: 75% dioxan, 0.1 M NaClO4

C8H8O4 HL CAS 520-45-6 (4478)

3-Acetyl-2-hydroxy-6-methylpyran-4-one, Dehydroethanoic acid;

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

Fe++ gl diox/w 35°C 50% U K1=3.11 B2=5.78 1971MAa (60087) 650
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

Fe++ gl NaCl 37°C 0.15M U 1988HYa (60125) 651

B(FeHL)=10.66

B(FeH2L)=13.25

B(FeHL2)=14.58

C8H9NO2 HL CAS 1726-86-9 (1487)

2-Hydroxy-5-methylbenzaldehyde oxime; CH3.C6H3(OH).CH:NOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	20°C	0.10M	U		K1=9.7 B2=17.40	1965BEb (60195)	652

C8H9NO2 HL CAS 2446-50-6 (8185)
N-Methyl-benzohydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	vlt	non-aq	25°C	100%	C		B3=14.4	1992SSe (60266)	653

Medium: acetonitrile, 0.20 M Et4NPF6. Method: cyclic voltammetry.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.05M	M		K1=3.97	1975DPb (60372)	654

C8H9NO3 H2L CAS 26071-07-8 (209)
5-Methylsalicylhydroxamic acid; CH3.C6H3(OH).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	EMF	diox/w	30°C	50%	U		K1=8.65	1977DJa (60437)	655

Medium: 50% dioxan, 0.1 M NaClO4

C8H9NO4 HL CAS 78257-51-9 (887)
4-Ethoxyppyridine-2-carboxylic acid N-oxide; C2H5O.C5H3N-O(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	30°C	0.10M	U	I	K1=3.80 B2=6.97	1981RMa (60478)	656

C8H9NO4 H2L (4520)
Dehydroethanoic acid oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	35°C	50%	U			1971MAa (60493)	657

K(Fe+HL)=2.92

K(Fe+2HL)=5.33

Medium: 50% dioxan, 0.01 M NaClO4

C8H9N3O7 H2L Uramildiacetic CAS 13055-06-5 (185)
5-Amino-2,4,6-trioxo-1,3-perhydrodiazimino-N,N-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++ oth KNO3 25°C 0.10M U K1=10.56 1972FVa (60632) 658

C8H11N L CAS 69376-33-6 (542)
2,4,6-Trimethylpyridine; C5H2N.(CH3)3

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

Fe++ vlt non-aq 20°C 100% U M 1978KBb (60945) 659
K(FeA+L)=0.24

Medium: DMSO. A=Phthalocyanine

C8H11NO8 H4L CAS 7408-20-0 (2608)
Amino-di(butanedioic acid);HN(CH(COOH)CH2.COOH)2

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

Fe++ gl KCl 25°C 0.1M U K1=9.00 B2=14.85 2002KNa (61206) 660
B(FeHL)=13.53
B(FeH2L)=17.36
B(Fe(OH)L)=4.40

C8H12N4B- L (7238)
(Pyrazol-1-yl) dihydro(3,5-dimethylpyrazol-1-yl) borate; C3H3N2.BH2.C3HN2(CH3)2-

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

Fe++ dis non-aq 25°C 100% U 1996KSa (61544) 661
K(Fe+2HL=FeL2(org)+2H)=-3.82

By solvent extraction into CHCl3

C8H12N4O3 HL His-Gly CAS 2578-58-7 (274)
Histidyl-glycine; H2N.CH(CH2.C3H3N2).CO.NH.CH2.COOH

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

Fe++ gl none 21°C 0.0 M K1=4.20 1974YAa (61629) 662

C8H13NO6S H3L (5675)
2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; HOOCH2.S.CH2.CH2.N(CH2COOH)2

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

Fe++ gl NaClO4 25°C 0.10M U K1=8.94 1975POa (61823) 663
K(Fe+HL)=2.11

C8H14N2O2 H2L Octoxime CAS 18310-14-0 (1303)
1,2-Cyclooctanedione dioxime; C8H12(:NOH)2

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

Fe++ gl diox/w 20°C 75% U K1=13.10 B2=24.55 1981HFa (61898) 664

Fe++ gl NaClO4 20°C 0.10M C 1980MHa (61899) 665

K(Fe+HL)=10.21

K(Fe+2HL)=19.70

C8H14N2O4 H2L CAS 55033-06-2 (8139)

Azetidine-2-carboxy-1-(2-aminobutaneioic acid)

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

Fe++ gl KNO3 25°C 0.10M C K1=8.3 1989ARa (61951) 666

Fer another racemate: K1=7.65

Fe++ gl KNO3 25°C 0.10M C K1=8.3 1989ARa (61952) 667

Fer another racemate: K1=7.65

C8H14O4S3 H2L (2526)

3,6,9-Trithiaundecanedioic acid; H00C.CH2.S.C2H4.S.C2H4.S.CH2.C00H

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

Fe++ gl NaClO4 25°C 0.10M U K1=1.88 1971PPc (62122) 668

K(Fe+HL)=0.7

C8H14O7 H2L (241)

Di(carboxymethoxy)ethyl ether; (H00C.CH2.O.CH2.CH2)2O

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

Fe++ gl KNO3 25°C 0.10M U K1=2.71 1975MTc (62148) 669

C8H16N2O4 H2L (267)

1,2-Diaminoethane-N,N'-di(2-propanoic acid); ((CH3)(COOH).CH.NH.CH2)2

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

Fe++ gl KNO3 20°C 0.10M U K1=8.45 1966MKb (62471) 670

C8H16N2O4 H2L CAS 13288-40-9 (3237)

1,2-Diaminoethane-N,N'-di(3-propanoic acid); (H00CCH2CH2NHCH2.)2

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

Fe++ gl KCl 30°C 0.10M U K1=6.3 1953CCb (62501) 671

C8H16O2S2 H3L Dihydrolipoic (6750)

6,8-Dimercapto-octanoic acid, dihydrolipoic acid; HSCH2.CH2.CH(SH).(CH2)4.C00H

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

B(FeH6L2)=61.23
B(FeH5L2)=57.21
B(FeH4L2)=51.85
B(FeH4L3)=59.42

N-Butyl-2,2'-iminodiethanol (butyldiethanolamine);

Medium: CH₂O/CH₂NH₂.HNO₃

1-Thia-4,7,10-triazacyclododecane; cyclo(-S.(C2H4.NH)3.C2H4-)

1,4,7,10,13-Pentaazatridecane (Tetraethylenepentamine);

$$\begin{aligned} K(\text{Fe}(\text{CN})_6 + \text{HL}) &= 3.10 \\ K(\text{Fe}(\text{CN})_6 + \text{H}_2\text{L}) &= 4.40 \\ K(\text{Fe}(\text{CN})_6 + \text{H}_3\text{L}) &= 6.50 \\ K(\text{Fe}(\text{CN})_6 + \text{H}_4\text{L}) &= 8.98 \end{aligned}$$
$$\Delta H(\text{Fe}(\text{CN})_6 + \text{HL}) = -8 \text{ kJ mol}^{-1}; \Delta H(\text{Fe}(\text{CN})_6 + \text{H}_2\text{L}) = 3; \Delta H(\text{Fe}(\text{CN})_6 + \text{H}_3\text{L}) = 11.$$
$$\Delta H(K1) = -36.4 \text{ kJ mol}^{-1}, \Delta S = 66.9 \text{ J K}^{-1} \text{ mol}^{-1}$$
$$K(\text{Fe}+\text{HL})=4.2$$

$K_1 = 11.18(35^\circ\text{C}), 10.97(45^\circ\text{C})$. $\Delta H(K_1) = -39.1 \text{ kJ mol}^{-1}$, $\Delta S = 84 \text{ J K}^{-1} \text{ mol}^{-1}$

5,7-Dibromo-8-hydroxyquinoline;

Fe++ gl diox/w 35°C 75% U K1=7.43 B2=14.51 1970GMh (63519) 679
Medium: 75% v/v dioxan, 0.2 M NaCl04

C9H5NOClI HL CAS 130-26-7 (1541)

5-Chloro-7-iodo-8-hydroxyquinoline;

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

Fe++ gl diox/w 25°C 75% U K1=7.61 B2=15.41 1958JPa (63527) 680
K3=4.82

Medium: 75% dioxan, 0.3 M NaCl

C9H5NOCl2 HL CAS 773-76-2 (3278)

5,7-Dichloro-8-hydroxyquinoline;

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

Fe++ gl diox/w 35°C 75% U K1=7.13 B2=14.00 1970GMh (63541) 681
Medium: 75% dioxan, 0.2 M NaCl04

Fe++ gl diox/w 25°C 75% U K1=7.50 B2=14.81 1958JPa (63542) 682
K3=4.50

Medium: 75% dioxan, 0.3 M NaCl

C9H5NOI2 HL CAS 83-73-8 (3280)

5,7-Di-iodo-8-hydroxyquinoline;

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

Fe++ gl diox/w 35°C 75% U K1=7.40 B2=14.35 1971MAb (63562) 683
Medium: 75% v/v dioxan, 0.1 M NaCl04

Fe++ gl diox/w 25°C 75% U K1=7.40 B2=15.09 1958JPa (63563) 684
K3=4.25

Medium: 75% dioxan, 0.3 M NaCl

C9H5NO2Br2 HL CAS 16846-41-1 (4666)

5,7-Dibromo-8-hydroxyquinoline N-oxide;

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

Fe++ gl diox/w 35°C 75% U K1=5.93 B2=11.25 1970GMh (63582) 685
Medium: 75% v/v dioxan, 0.2 M NaCl04

C9H5NO2Cl2 HL CAS 21168-33-2 (4665)

5,7-Dichloro-8-hydroxyquinoline N-oxide;

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

Fe++ gl diox/w 35°C 75% U K1=5.80 B2=11.43 1970GMh (63592) 686

Medium: 75% v/v dioxan, 0.1 M NaClO4

C9H5NO4 HL CAS 22308-86-7 (4607)
3-Nitroso-4-hydroxycoumarin (oximidobenzotetronic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	diox/w	21°C	50%	U			B3=12.70	1970MGd (63606)	687

Medium: 50% dioxan, 0.3 M NaClO4

Fe++	dis	NaClO4	20°C	0.10M	U			B3=13.91	1969MBe (63607)	688
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C9H5N2O2Cl HL CAS 20254-76-6 (1414)
3-Chloroquinoxaline-2-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	alc/w	20°C	5%	U T			K1=3.40	1982KRd (63620)	689

C9H5N3O5 HL CAS 1084-32-8 (4608)
5,7-Dinitro-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	diox/w	35°C	75%	U			K1=4.95 B2=8.87	1970GMh (63627)	690

Medium: 75% dioxan, 0.2 M NaClO4

C9H5N3O6 HL CAS 21168-36-3 (4609)
5,7-Dinitro-8-hydroxyquinoline-N-oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	diox/w	35°C	75%	U			K1=3.12 B2=5.15	1970GMh (63635)	691

Medium: 75% v/v dioxan, 0.2 M NaClO4

C9H6NOBr HL CAS 1198-14-7 (3281)
5-Bromo-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	diox/w	25°C	75%	U			K1=7.92 B2=16.11 K3=5.30	1958JPa (63643)	692

Medium: 75% dioxan, 0.3 M NaCl

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ gl diox/w 25°C 60% U K1=8.61 B2=16.62 1973SCd (63660) 693
Medium: 60% dioxan, 0.1 M NaCl04

Fe++ gl diox/w 25°C 75% U K1=7.86 B2=15.93 1958JPa (63661) 694
K3=4.50

Medium: 75% dioxan, 0.3 M NaCl

C9H6NOF HL CAS 387-97-3 (3283)

5-Fluoro-8-hydroxyquinoline;

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

Fe++ gl diox/w 25°C 50% U B2=15.9 1958TWa (63672) 695
B3=21.3

Medium: 50% dioxan, 0.3 M NaCl

C9H6NOI HL CAS 15207-63-1 (3282)

5-Iodo-8-hydroxyquinoline;

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

Fe++ gl diox/w 25°C 75% U K1=7.58 B2=15.71 1958JPa (63682) 696
B3=21.06

Medium: 75% dioxan, 0.3 M NaCl

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

Fe++ gl KNO3 25°C 0.10M C K1=9.53 B2=17.74 1985ZHa (63790) 697

Fe++ gl oth/un 20°C 0.03M U K1=6.79 1977KCb (63791) 698

Fe++ gl diox/w 25°C 50% U B2=13.8 1958TWa (63792) 699
B3=18.85

Medium: 50% dioxan, 0.3 M NaCl

C9H6N2O2 HL CAS 879-65-2 (1413)

Quinoxaline-2-carboxylic acid;

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

Fe++ gl alc/w 20°C 5% U T K1=3.40 1982KRa (63850) 700

C9H6N2O3 HL CAS 1204-75-7 (1415)

3-Hydroxyquinoxaline-2-carboxylic acid;

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

 Fe++ gl alc/w 20°C 5% U T K1=3.31 1982KR a (63852) 701

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

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

Fe++ gl diox/w 25°C 60% U K1=8.56 B2=16.18 1973SCd (63862) 702
 Medium: 60% dioxan, 0.1 M NaClO4

C9H6O4 HL Ninhydrin CAS 485-47-2 (2536)
 1,2,3-Indantrione monohydrate, Trioxohydrindene monohydrate;

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

Fe++ gl alc/w 30°C 5% M M K1=6.54 B2=11.70 1994RRb (63950) 703
 K(Fe(bpy)+L)=7.23
 K(FeA+L)=5.85
 K(FeB+L)=5.05
 B(Fe(ala)L)=14.13

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. B(Fe(val)L)=14.04, B(Fe(en)L)=11.48
 H2A is oxalic acid; H2B is catechol.

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

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

Fe++ gl diox/w 25°C 60% U K1=9.59 B2=18.17 1973SCd (64256) 704
 Medium: 60% dioxan, 0.1 M NaClO4

 Fe++ sp mixed ? 90% U I B2=13.7 1966BA b (64257) 705
 Medium: N2H4/H2O. B2=6.5(5%),6.5(10%),6.9(25%),8.6(50%),10.7(64%),13.0(85%)

 Fe++ gl diox/w 25°C 75% U K1=8.58 B2=16.93 1958JPa (64258) 706
 B3=22.23

Medium: 75% dioxan, 0.3 M NaClO4

 Fe++ gl diox/w 25°C 50% U K1=8.71 B2=16.83 1958TWb (64259) 707
 B3=22.13

Medium: 50% dioxan, 0.3 M NaClO4

 Fe++ gl oth/un 20°C 0.01M U K1=8.0 B2=15.0 1953ALa (64260) 708

 Fe++ gl diox/w 25°C 70% U K1=9.83 B2=18.84 1949MMA (64261) 709

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	25°C	50%	U		K1=10.75 B2=19.60	1970GMb (64403)	710
Medium: 50% dioxan, 0.3 M NaClO4									

C9H7N04S		H2L		Sulfoxine			CAS 84-88-8 (448)		
8-Hydroxyquinoline-5-sulfonic acid;									
Fe++	sp	mixed	?	64%	U I		B2=9.3	1966BAb (64535)	711
Medium: 64% N2H4. B2=6.2(5% N2H4), 5.7(10%), 6.2(25%), 8.0(50%)									
Fe++	gl	NaCl	25°C	0.30M	U		B2=15.7 B3=21.75	1958TWa (64536)	712
Fe++	gl	oth/un	20°C	0.01M	U		K1=8.4 B2=15.1	1953ALa (64537)	713

C9H7N3O2S		H2L		TAR			CAS 2246-46-0 (707)		
4-(2'-Thiazolylazo)-resorcinol; C3H2NS.N:N.C6H3(OH)2									
Fe++	sp	none	25°C	0.0	U		B3=23.03	1985FYa (64703)	714
Fe++	gl	alc/w	25°C	50%	U		K(Fe+2HL)=21.6	1967NPb (64704)	715
Medium: 50% MeOH, 0.1 M NaClO4									

C9H8N4O4S2		H2L					(2879)		
Indol-2,3-dione-3-thiosemicarbazone-5-sulfonic acid;									
Fe++	gl	KN03	37°C	0.15M	M		K1=4.3 B2=8.91	1982STa (64862)	716

C9H8O3		H2L		o-Coumaric acid			CAS 501-98-4 (6327)		
4-Hydroxycinnamic acid; HO.C6H4.CH:CH.CO0H									
Fe++	gl	NaClO4	25°C	0.10M	U		K1=11.38 B2=20.29	1975TBb (64884)	717

C9H8O4		HL		Acetylsalicylic			CAS 50-78-2 (1240)		
2-Acetoxybenzoic acid, Acetylsalicylic acid; CH3.CO.O.C6H4.CO0H									
Fe++	gl	KN03	RT	0.10M	C		K1=2.7 B2= 5.30	1985KLc (64896)	718

 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
Fe++	gl	NaCl	25°C	0.10M	C		K1=3.86 B(FeH-1L)=-3.83 B(FeH-1L2)=-0.36 B(FeH-2L3)=-6.14 B(Fe2L)=6.69	1987LVa (64919)	719

 C9H9NO2 HL CAS 25355-34-4 (6206)
 1-Phenyl-prop-1,2-dione monoxime; C6H5.CO.C(:NOH).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	alc/w	25°C	75%	U		K1=13.5 B2=22.90 K3=6.4	1986BTa (65036)	720

Medium: 75% MeOH/H2O, 0.1 M NaClO4

 C9H10N2O2 HL CAS 52829-64-8 (4627)
 2-Acetoacetamidopyridine; C5H4N.NH.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	U		K1=5.65	1967HAb (65228)	721

 C9H10N2O3 HL CAS 62134-49-0 (9110)
 N-(2-Pyridyl)-3-carboxypropanamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	25°C	0.10M	U		K1=4.19 B2= 6.39	2002GSa (65261)	722

 C9H10N6B HL CAS 18583-60-3 (7936)
 Hydrotris(pyrazolyl)borate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	dis	non-aq	25°C	100%	C			2001KSb (65310)	723

K(Fe+2HL=FeL2(org)+2H)=4.8

Method: solvent extraction into chloroform.

K: Fe+2HL(org)=FeL2(org)+2H.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++ gl NaClO4 30°C 0.19M U K1=5.55 B2=9.65 1985MSb (65643) 724

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

Fe++ gl NaClO4 25°C 3.0M U T K1=3.74 B2=7.19 1972WYa (65934) 725

Fe++ gl KCl 20°C 1.0M U K1=3.26 1959PEc (65935) 726

Fe++ gl oth/un 20°C 0.01M U B2=6.3 1950ALa (65936) 727

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

Fe++ gl oth/un 20°C 0.01M U 1952ALa (66219) 728
K(Fe+2HL)=7.1

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

Fe++ gl NaCl 25°C 0.12M U K1=8.80 1978RMc (66396) 729

C9H11NO4 HL CAS 18901-23-2 (888)
4-n-Propoxy-pyridine-2-carboxylic acid N-oxide;

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

Fe++ gl NaClO4 30°C 0.10M U I K1=3.71 B2=6.84 1981RMa (66406) 730

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

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

Fe++ gl diox/w 35°C 50% U I K1=7.84 B2=14.21 1993GJa (66505) 731
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.
Also data for 50% dioxane/H2O, 0.0200.2 M NaClO4. At I=0, K1=8.47.

C9H14N2O5 L beta-Asp-Pro CAS 66180-29-8 (8142)
Pyrrolidine-2-carboxy-1-(2-amino-4-one-butanoic acid), beta-Aspartly-proline;

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

Fe++ gl KNO3 25°C 0.10M C K1=4.7 1989ARa (67129) 732

C9H15NO6S	H3L	DCMM	CAS 72306-91-3	(8239)
Dicarboxymethyl-N,N-methionine acid;				

Fe++ gl NaCl 25°C 0.50M C 1980MFC (67469) 733
K(Fe+HL)=4.66
K(FeHL+HL)=3.41

Fe++	g1	KCl	25°C	1.0M C	K1=6.50	B2=11.38	1979MBg (67470)	734
					K(Fe+HL)=4.66			
					K(FeHL+HL)=3.41			

C9H16N2O4 H2L CAS 96287-30-8 (8140)
Azetidine-2-carboxy-1-(2-aminopentanoic acid);

Fe++ g1 KNO3 25°C 0.10M C K1=5.7 1989ARa (67618) 735

C9H17N05 HL Pantothenic acid CAS 63409-48-3 (2629)
N-(2,4-Dihydroxy-3,3-dimethylbutyryl)-3-aminopropanoic acid;

Fe++ g1 KCl 25°C 0.24M U K1=1.38 1980Fmd (67814) 736

C9H21N3O3 L CAS 221233-44-9 (7658)
cis,cis,cis-2,4,6-Trimethoxycyclohexane-1,3,5-triamine;

Fe++ g1 KNO3 25°C 0.10M C K1=9.03 B2=16.14 1999Wka (68213) 737

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

Fe++	gl	KN03	25°C	1.00M U	K1=18.7 K(Fe+HL)=12.7 K(Fe+H2L)=9.9 K(Fe+H3L)=7.2	1990BSd (68317) 738
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C10H6N2O HL CAS 6759-78-0 (3316)
5-Cyano-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Medium: 50% dioxan, 0.3 M NaCl

C10H6N2O4 HL CAS 83848-59-3 (1412)

5-Nitroquinoline-8-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ gl alc/w 20°C 50% U T K1=4.26 1982KRa (68443) 740

$$K(\text{FeL} + \text{HL} = \text{FeHL}_2) = 3.77$$

C10H7NO2 HL CAS 132-53-6 (2524)

2-Nitroso-1-naphthol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	gl	diox/w	21°C	50%	U	K1=8.05	B2=16.19	1970MGd (68645)	741
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Medium: 50% dioxan, 0.3 M NaCl₀₄

C10H7NO2 HL CAS 2598-30-3 (3317)

5-Formyl-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Fe++ gl diox/w 25°C 50% U K1=6.90 B2=13.75 1958JPa (68671) 742

$$K3=5.70$$

Medium: 50% dioxan, 0.3 M NaCl

C10H7NO2	HL	Quinaldic acid	CAS 93-10-7	(2209)
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Quinoline-2-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	sp	none	?	0.0	U	B2=5.44	1964PCa (68706) 743
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Fe++ sp KN03 25°C 0.20M U B2=5.44 1958BRa (68707) 744

Fe++ gl oth/un 25°C 0.0 U K1=3.92 B2=7.67 1955LUa (68708) 745

C10H7N02 HL CAS 86-59-9 (873)

Quinoline-8-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ gl alc/w 20°C 5% U T K1=6.17 B2=10.28 1982KRα (68759) 746

Fe++	gl	oth/un	25°C	0.0	U	K1=3.68	B2=6.57	1955LUa (68760)	747
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C10H7NO5S H2L CAS 3682-32-4 (1812)
2-Nitroso-1-hydroxynaphthalene-4-sulfonic acid;

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

Fe++ sp none ? 0.0 U 1958TPa (68883) 748

B3=18.95

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

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

Fe++ gl KCl 25°C 0.10M U K1=7.85 B2=15.41 1974ANb (69008) 749

K3=7.50

Fe++ sp NaCl04 20°C 1.20M U K1=7.60 B2=15.04 1973SBf (69009) 750

B3=22.13

B4=30.63

C10H7N3O4 H2L 1-Ph-violuric (957)
1-Phenyl-alloxan-5-oxime, (1-Phenyl-5-isonitrosobarbituric acid);

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

Fe++ gl alc/w 18°C 50% U T K1=6.60 B2=11.62 1982SGa (69084) 751

Medium: 50% v/v EtOH/H2O, 0.1 M NaCl04

C10H7O2F3 HL CAS 326-06-7 (196)
3-Benzoyl-1,1,1-trifluoroacetone; CF3.CO.CH2.CO.C6H5

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

Fe++ gl alc/w 25°C 75% C K1=5.80 B2=10.81 1998ERa (69143) 752

B3=15.73

B(FeH-1L)=2.94

B(FeH-1L2)=7.36

Medium: 75% v/v EtOH/H2O, 0.10 M KCl

Fe++ dis NaNO3 25°C 0.10M C K1=4.2 B2=8.0 1994SDc (69144) 753

Method: solvent extraction into CHCl3

Fe++ gl oth/un ? 0.0 U B2=10.32 1951UFa (69145) 754

C10H8N2 L 2,2'-Bipyridyl CAS 366-18-7 (25)
2,2'-Bipyridine; (C5H4N)2

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

Fe++ kin non-aq 25°C 0.10M U K1=3.98 B2= 9.09 1998JMa (69552) 755

K3=3.54

Medium: DMF

Fe++	gl	alc/w	30°C	5%	M	K1=4.41	1994RRb (69553)	756
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Medium: 5% v/v EtOH/H₂O, 0.10 M KNO₃.

Fe++	sp	none	25°C	0.0	C	I	1986DSb (69554)	757
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B3=17.77

K(FeL₃+3H=Fe+3HL)=-4.63

Data for 0-75.8% w/w 2-PrOH/H₂O. In 75.8% 2-PrOH/H₂O, B3=14.68,
K(FeL₃+3H=Fe+3HL)=-6.05

Fe++	sp	none	25°C	0.0	C	I	1985DHb (69555)	758
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B3=17.53

K(Fe+3HL=FeL₃+3H)=4.12

Also data for 11-91% w/w DMSO/H₂O and formamide/H₂O.
In 52% DMSO/H₂O, B3=15.05.

Fe++	gl	diox/w	37°C	30%	C	M	B2=6.20	1983MAd (69556)	759
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B(Fe(bha)L)=9.42

bha: benzohydroxamic acid

Fe++	sp	oth/un	25°C	0.01M	C	H	1982BMg (69557)	760
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B3=17.54

By calorimetry in self-medium: DH=-117.15 kJ mol⁻¹. Also data for 10-50%
w/w MeOH/H₂O, EtOH/H₂O, t-BuOH/H₂O and glycerol/H₂O.

Fe++	sp	non-aq	25°C	100%	U		K1=4.82	1981AWa (69558)	761
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Medium: hexamethylphosphoric triamide

Fe++	sp	none	25°C	0.0	U	T H	1978ABa (69559)	762
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B3=17.39

Also at 35-160 C. DH(B3)=-128.7 kJ mol⁻¹. DS=-98.7 J K⁻¹ mol⁻¹

Fe++	cal	none	25°C	0.0	C	IH	1977BAa (69560)	763
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DH(B3)=-100.46 kJ mol⁻¹, DS=-10.5 J K⁻¹ mol⁻¹. DH(Fe+3HL=FeL₃+3H)=-74.47,
DS=167. Data for 0-64.7% w/w MeOH/H₂O. In 64.7%, DH(B3)=-129.1, DS=-136

Fe++	sp	none	25°C	0.0	U		1975HLb (69561)	764
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K3=17.77

In 8%MeOH 17.87; in 16.4%MeOH 17.89; in 25.2%MeOH 17.78; in 34.4%MeOH 17.72;
in 44%MeOH 16.85; in 54%MeOH 16.17; in 64.7%MeOH 15.52

Fe++	dis	oth/un	25°C	0.0	U	M	1972ARb (69562)	765
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K(FeL₃+2ClO₄=FeL₃(ClO₄)₂)=2.08

K(FeL₃+2I=FeL₃I₂)=1.62

By conductivity: K(FeL₃+2ClO₄)=2.05, K(FeL₃+2I)=1.71, K(FeL₃+Cl₂)=1.30.

Fe++	sp	mixed	?	50%	U	I	1966BAb (69563)	766
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B3=6.8

Medium: 50% N2H4. B3=17.9(0%), 9.0(5%), 8.2(10%), 7.9(25%)

Fe++ dis KNO3 30°C 1.0M U H K1=4.65 1965DDa (69564) 767
B3=17.14

By calorimetry:DH(B3)=-117.0 kJ mol-1, DS=-58 J K-1 mol-1

Fe++ cal NaNO3 20°C 0.10M U H 1963ANb (69565) 768
DH(B3)=-131.0 kJ mol-1, DS=-113 J K-1 mol-1

Fe++ gl NaNO3 20°C 0.10M U 1963ANG (69566) 769
B3=17.45

Fe++ dis KCl 25°C 0.10M U K1=4.20 B2=7.90 1962IMa (69567) 770
K3=9.55

Fe++ sp oth/un 25°C .025M U T H K1=4.2 1950BGa (69568) 771
B3=17.07

35 C: K2 < 5, B3=16.53; DH(K1)=-31.4 kJ mol-1; DH(B3)=-101.7

Fe++ gl oth/un 25°C 0.33M U I K1=4.43 1950KRa (69569) 772
B3=17.58

I=0.01 B3=17.41

Fe++ sp oth/un 25°C 0.0 U K1=4.36 1949KRa (69570) 773

Fe++ EMF oth/un 25°C .008M U 1947DMa (69571) 774
B3=16.4

C10H8N2O2 HL CAS 80690-06-8 (874)
5-Aminoquinoline-8-carboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Fe++ gl alc/w 20°C 50% U T K1=7.46 1982KRa (69675) 775
K(FeL+HL=FeHL2)=5.43

C10H8N2O2 HL (3318)
8-Hydroxyquinoline-5-carbaldehyde oxime

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Fe++ sp diox/w 25°C 50% U B2=14.9 1958TWa (69684) 776
B3=20.2

Medium: 50% dioxan, 0.3 M NaCl

C10H8N2O2S HL CAS 15112-10-4 (8299)
N-Phenyl-2-thiobarbituric acid;

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

Fe++ gl NaClO4 31°C 0.10M U T H K1=6.32 B2=11.21 1984SJa (69691) 777
 Also data for 18 and 42 C. DH(K1)=-82.0 kJ mol⁻¹, DS(K1)=-149 J K⁻¹ mol⁻¹
 DH(K2)=-46.5, DS(K2)=-60.0. Also data for N-tolyl- derivatives.

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

Fe++ gl NaClO4 25°C 0.10M C K1=8.99 B2=16.49 1977Bmd (69807) 778

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

Fe++ gl KNO3 27°C 0.10M U K1=6.00 B2= 9.45 1988AIa (69943) 779

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

Fe++ gl diox/w 25°C 50% U K1=8.75 B2=17.10 1958TWa (70046) 780

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

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

Fe++ gl diox/w 25°C 50% U B2=16.90 1958TWa (70064) 781
 B3=29.68

Medium: 50% dioxan, 0.3 M NaCl

C10H9NO7S2 H3L CAS 82-47-3 (6247)
 8-Amino-1-hydroxynaphthalene-3,6-disulfonic acid;

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

Fe++ gl oth/un 20°C 0.0 U K1=2.57 B2=5.5 1961PEb (70220) 782

C10H9NO8 H2L CAS 83785-11-9 (685)
 2-Nitro-1,4-di(carboxymethoxy)benzene; O2N.C6H3.(OCH2COOH)2

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

Fe++ gl oth/un 30°C ? U K1=4.03 B2=8.29 1985TZa (70234) 783

C10H9N3O2 HL CAS 56634-85-6 (1326)
 4-Oximino-3-methyl-1-phenyl-2-pyrazolin-5-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	alc/w	32°C	40%	U			1968SPb (70390)	784
							K(Fe+HL=FeL+H)=3.47		

Medium: 40% EtOH, 0.2 M NaClO4

C10H9N5	HL	(3892)
1-(Pyrimidin-2'-yl)-3-pyridyl-1,2-diazaprop-2-ene;		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	25°C	?	U		B2=30	1964GHb (70416)	785
							K(FeHL2+H)=4.56		
							K(FeL2+H)=6.09		

By spectrophotometry: K(Fe+HL)=6.0, K(Fe+2HL)=14.00

C10H10N4O4S2	H2L	CAS 78441-02-8 (2880)
N-Methylindol-2,3-dione-3-thiosemicarbazone-5-sulfonic acid;		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	37°C	0.15M	M		K1=4.1 B2=8.98	1982STa (70624)	786

C10H10O2	HL	Benzoylacetone	CAS 93-91-4 (197)
1-Phenylbutane-1,3-dione; C6H5.CO.CH2.CO.CH3			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	alc/w	25°C	75%	C		K1=6.56 B2=11.97 B3=14.12	1998ERa (70725)	787

Medium: 75% v/v EtOH/H2O, 0.10 M KCl

C10H11NO4	H2L	CAS 1137-73-1 (2567)
N-Phenyliminodiethanoic acid; C6H5.N(CH2.CO.OH)2		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	20°C	0.10M	U		K1=2.01	1955SAa (71001)	788

C10H11N3	L	CAS 49612-00-2 (3301)
2-Hydrazino-4-methylquinoline;		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	22°C	0.10M	U		K1=4.4 B2=7.8	1957FEa (71079)	789

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	20°C	0.10M	C		K1=9.00	1981ANb (71258)	790
Fe++	gl	KNO3	20°C	0.10M	U		K1=8.94	1963IFc (71259)	791

C10H12N4O5		HL		Inosine			CAS 58-63-9	(2344)	
Hypoxanthine-9-beta-D-ribofuranoside;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=3	1953ALa (71387)	792

C10H12N4O6		H2L		Xanthosine			CAS 5968-90-1	(1176)	
3,9-Dihydro-9-ribofuranosyl-1H-purine-2,6-dione;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=<2	1953ALa (71487)	793

C10H13N5O5		HL		Guanosine			CAS 118-00-3	(1402)	
2-Aminopurin-6-one-9-riboside;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		K1=4.3	1953ALa (72009)	794

C10H13N5O5		L					CAS 116-92-9	(2174)	
Adenosine-N'-oxide;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	none	25°C	0.0	U		K1=6.58	1960PEb (72032)	795

C10H14N4B-		L					(7239)		
Bis(3,5-dimethylpyrazol-1-yl)borate; ((CH3)2C3H)2BH2-									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	dis	non-aq	25°C	100%	U			1996KSa (72128)	796
K(Fe+2HL=FeL2(org)+2H)=-2.64									
By solvent extraction into CHCl3									

C10H14O8S4		H4L					CAS 10003-69-7	(3914)	
1,1,2,2-Tetrathioethane-S,S',S'',S'''-tetraethanoic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	25°C	0.10M	U		K1=2.68	1973PPc (72626)	797
B(FeHL)=6.59									

B(FeH2L)=10.22

B(Fe2L)=4.18

Fe++ gl oth/un 25°C 0.10M U K1=1.9 1972PPb (72627) 798

C10H15NO L Ephedrine CAS 299-42-3 (1836)
(1-Methylaminoethyl)benzyl alcohol; C6H5.CH(OH)CH(CH3)NHCH3

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

Fe++ gl KCl 25°C .058M U T K1=6.25 B2=9.95 1961Sma (72643) 799
K1=6.49(0 C), 5.70(45 C)

C10H15N5O4 HL His-Gly-Gly CAS 32999-80-7 (6269)
Histidyl-glycyl-glycine;

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

Fe++ gl none 21°C 0.0 M K1=3.92 1974Yaa (72825) 800

C10H16N2O5 H2L gamma-Glu-Pro CAS 53411-63-5 (8143)
Pyrrolidine-2-carboxy-1-(2-amino-5-one-pentanoic acid, Gamma-Glutamyl-proline;

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

Fe++ gl KNO3 25°C 0.10M C K1=4.2 1989ARa (73058) 801

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

Fe++ dis KNO3 20°C 0.10M U K1=10.7 1968MJa (73130) 802
Method: paper electrophoresis

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

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

Fe++ sp alc/w 25°C 75% U K1=15.80 1991CMc (73754) 803
K(FeL+H)=3.13

Medium: 75% v/v EtOH/H2O

Fe++ gl KNO3 25°C 0.10M C K1=14.94 1988CMb (73755) 804
K(FeL+H)=2.06

Fe++ gl NaClO4 25°C 1.00M C 1983AHa (73756) 805
K(FeL+H)=2.90

Fe++ oth none 25°C 0.0 U K1=14.3 1977DFa (73757) 806
 Calculated from a model. Constants also for many related Fe++ complexes.

Fe++ vlt oth/un 20°C 0.20M U T 1972B0a (73758) 807
 K(Fe+HL)=6.90
 K(Fe+H2L)=3.32
 K(Fe+HL)=6.91(10 C), K(30 C)=6.89, K(40 C)=6.88
 K(Fe+H2L)=3.36(10 C), K(30 C)=3.32, K(40 C)=3.30

Fe++ vlt oth/un 20°C 0.20M U T 1971BFa (73759) 808
 K(Fe+HL)=6.90
 K(Fe+H2L)=3.26
 K(Fe+HL)=6.90(10 C), K(30 C)=6.83, K(40 C)=6.87
 K(Fe+H2L)=3.38(10 C), K(30 C)=3.40, K(40 C)=3.34

Fe++ cal KNO3 25°C 0.10M U K1=14.19 1969BNa (73760) 809
 K(Fe+HL)=5.47

Fe++ cal KNO3 25°C 0.10M U H 1965WHa (73761) 810
 DH(K1)=-16.7 kJ mol⁻¹, DS=213 J K⁻¹ mol⁻¹

Fe++ gl KNO3 20°C 0.10M U K1=14.2 1964ANa (73762) 811
 K(Fe+HL)=6.86

Fe++ gl KNO3 25°C 0.10M U K1=14.33 1959SCc (73763) 812
 K(FeL+OH)=4.9
 K(FeLOH+OH)=4.1

Fe++ EMF KCl 20°C 0.10M U T K1=14.33 1954SGa (73764) 813
 K(Fe+HL)=6.86
 K(FeL+H)=1.31

Method: H electrode

Fe++ EMF oth/un 25°C 1.0M U K1=13.9 1952JLa (73765) 814
 Method: H electrode

C10H16N5O13P3 H4L ATP CAS 56-65-5 (403)
 Adenosine-5'-triphosphoric acid;

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

Fe++ gl NaCl 25°C 0.12M U K1=5.11 1978RMc (74729) 815

Fe++ gl KNO3 25°C 1.00M U M 1976RDa (74730) 816
 K(FeL+hydroxynorephedrin)=3.94
 K(FeL+normetanephrene)=4.07
 K(FeL+norpinephrine)=6.30
 K(FeL+dopamine)=7.98

Fe++ gl KNO3 25°C 1.00M U M 1976RDa (74731) 817

K(FeL+octopamine)=3.78
 K(FeL+tyramine)=5.00
 K(FeL+norephedrine)=3.34
 K(FeL+hydroxyamphetamine)=5.11

C10H16O8P2 H4L (6907)

1,2-Diphosphinoethane-P,P,P'P'-tetraethanoic acid;
 (HOOC.CH2)2P.CH2.CH2.P(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	NaClO4	25°C	0.10M	C		B2=16.44 B(FeH2L2)=27.51 B(FeH4L2)=35.41 B(FeH6L2)=41.30	1992PPb (74946)	818
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Additional method: competition with 1,10-phenanthroline

Fe++	gl	NaClO4	25°C	0.10M	C		B(FeH2L2)=27.51	1982PPc (74947)	819
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C10H17NO5 H2L CAS 6243-06-7 (3326)

N-(2-Hydroxycyclohexyl)iminodiethanoic acid; HO.C6H10.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	KCl	20°C	0.10M	U		K1=7.69 B2=10.69	1964PCa (74987)	820
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C10H17NO5 H2L (3917)

N-(Tetrahydropyran-2-ylmethyl)iminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	KNO3	20°C	0.10M	U		K1=7.40	1963IFa (75001)	821
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C10H18N2O4 H2L CAS 96287-33-1 (8141)

Pyrrolidine-2-carboxy-1-(2-aminopentanoic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	KNO3	25°C	0.10M	C		K1=5.6	1989ARa (75207)	822
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C10H18N2O5 H2L (5608)

1-Oxa-4,7-diazacyclononane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	KNO3	25°C	0.10M	U		K1=9.70	1990CCa (75234)	823
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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
Fe++	gl	KNO3	25°C	0.10M	C		K1=12.58 K(FeL+H)=2.36	1988CMb (75384)	824
Fe++	vlt	oth/un	20°C	0.20M	U	T	K(Fe+HL)=5.11 K(Fe+HL)(10 C)=5.15, K(30 C)=5.08, K(40 C)=5.08	1971BFa (75385)	825
Fe++	gl	KNO3	25°C	0.10M	U		K1=11.63	1969BNa (75386)	826
2nd method: calorimetry									
Fe++	cal	KNO3	25°C	0.10M	U	H		1965WHa (75387)	827
DH(K1)=-25.1 kJ mol-1, DS=128 J K-1 mol-1									
Fe++	gl	KNO3	25°C	0.10M	U		K1=12.2 K(FeLOH+H)=8.97 K(FeL(OH)2+H)=10.03	1959SCc (75388)	828
Fe++	gl	KCl	30°C	0.10M	U		K1=11.6	1955CMa (75389)	829

C10H18O8		H2L		CAS 32775-08-9		(240)			
1,12-Dicarboxy-2,5,8,11-tetraoxadodecane; (HOOC.CH2.O.CH2.CH2.O.CH2)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	U		K1=2.46	1975MTc (75619)	830

C10H21N11		L		(7006)					
1,7-Di(2-(5-tetraazolyl)ethyl)-1,4,7-triazaheptane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	20°C	0.10M	U		K1=15.72	1981ESa (76211)	831

C10H23N3O2		L		CAS 60350-18-7		(5875)			
1,4-Dioxa-7,10,13-triazacyclopentadecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=7.79 K(FeLOH+H)=9.1	1994CDa (76523)	832

C10H24N4		L		Cyclam		CAS 295-37-4		(8)	
1,4,8,11-Tetraazacyclotetradecane; cyclo(-(HN.CH2.CH2.NH.(CH2)3)2-)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	25°C	70%	C			2001PAa (76664)	833

K(Fe(Cp)2L+H)=9.21
K(Fe(Cp)2L+2H)=15.27
K(Fe(Cp)2L+3H)=18.46

Medium: 70% v/v dioxan/H2O, 0.10 M KN03. Fe(Cp)2 is ferrocene.

C10H24N4O L (7051)

1-Oxa-4,7,10,13-tetraazacyclopentadecane;

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

Fe++ gl KN03 25°C 0.10M C K1=10.34 1994CDa (76709) 834

C10H28N6 L PENTEN CAS 4097-90-9 (3315)

N,N,N',N'-Tetra-(2-aminoethyl)diaminoethane;

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

Fe++ cal KCl 25°C 0.10M U H K1=11.05 1964SPb (76872) 835

K calculated. By calorimetry: DH(K1)=-40.3 kJ mol⁻¹, DS=79.4 J K⁻¹ mol⁻¹

Fe++ gl KCl 20°C 0.10M U K1=11.20 1953SMa (76873) 836

K(Fe+HL)=8.70

K(FeL+H)=7.70

C11H803S HL CAS 32267-05-3 (3353)

2-Furoyl-2-thenoylmethane; C4H30.CO.CH2.CO.C4H3S

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

Fe++ gl diox/w 30°C 75% U K1=10.40 B2=20.05 1953UFe (77158) 837

C11H804 HL CAS 7555-37-5 (4812)

3-Acetyl-4-hydroxycoumarin

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

Fe++ gl diox/w 35°C 50% U K1=2.28 B2=4.00 1971MAa (77175) 838

Medium: 50% dioxan, 0.01 M NaClO4

C11H804 HL CAS 6724-42-1 (6183)

8-Formyl-7-hydroxy-4-methyl-2H-1-benzopyran-2-one; CH0.C9H30(:O)(CH3)(OH)

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

Fe++ gl alc/w 35°C 70% U K1=6.86 B2=11.85 1984CEa (77199) 839

C11H9N02 HL CAS 92609-55-3 (4827)

5-Acetyl-8-hydroxyquinoline;

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

Fe++ gl diox/w 25°C 60% U K1=8.56 B2=16.18 1973SCd (77329) 840
Medium: 60% dioxan, 0.1 M NaClO4

C11H9N03 H2L CAS 80690-05-7 (872)
3-Hydroxy-2-methyl-1,4-naphthoquinone monoxime;

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

Fe++ gl diox/w 30°C 0.10M U K1=5.83 B2=11.12 1981KSa (77363) 841
K3=5.27

C11H9N03S2 HL (939)
2-(Thiophene-2'-aldimino)benzene sulfonic acid; C4H3S.CH:N.C6H4.S03H

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

Fe++ gl NaClO4 25°C 0.10M U K1=4.23 B2=7.20 1982MSa (77400) 842

C11H9N04 H2L CAS 4321-82-7 (4829)
3-Acetyl-4-hydroxycoumarin oxime;

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

Fe++ gl diox/w 35°C 50% U 1971MAa (77418) 843
K(Fe+HL)=2.08
K(Fe+2HL)=3.57

Medium: 50% dioxan, 0.01 M NaClO4

C11H9N04 HL CAS 65490-35-9 (6230)
8-Formyl-7-hydroxy-4-methyl-2H-[1]benzopyran-2-one-oxime; (CH3)(OH)C9H30(:O)CH:NOH

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

Fe++ gl alc/w 35°C 70% U K1=7.87 B2=13.62 1984CEa (77437) 844

C11H9N30 HL CAS 10335-29-2 (3937)
2-(2'-Pyridylazo)phenol; C5H4N.N:N.C6H4.OH

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

Fe++ sp alc/w 20°C 50% U B2=26.3 1967ANa (77456) 845
Medium: 50% MeOH, 0.1 M NaClO4

C11H9N30 HL CAS 7687-72-1 (3938)
4-(2'-Pyridylazo)phenol; C5H4N.N:N.C6H4.OH

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

Fe++ gl alc/w 25°C 50% U K1=5.6 B2=10.40 1967ANa (77472) 846

Medium: 50% MeOH, 0.1 M NaClO4

C11H9N3O4 H2L CAS 82628-26-0 (1379)
1-(2-Tolyl)violuric acid;

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

Fe++ gl alc/w 18°C 50% U T K1=6.28 B2=10.72 1982SGa (77621) 847
Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

C11H9N3O4 H2L CAS 82628-27-1 (1378)
1-(3-Tolyl)violuric acid;

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

Fe++ gl alc/w 18°C 50% U T K1=6.45 B2=11.30 1982SGa (77628) 848
Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

C11H9N3O4 H2L CAS 82628-25-9 (1377)
1-(4-Tolyl)violuric acid;

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

Fe++ gl alc/w 18°C 50% U T K1=6.70 B2=11.86 1982SGa (77635) 849
Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

C11H9N3O5S HL (6249)
1,2-Naphthoquinone-4-sulfonic acid 2-semicarbazone; C10H5(:O)(HSO3):N.NH.CO.NH2

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

Fe++ gl NaClO4 28°C 0.10M U T H K1=5.20 B2=9.85 1980MGd (77641) 850

C11H10N4 L PAPHY CAS 2215-33-0 (1305)
Pyridine-2-aldehyde-2'-pyridyl-hydrazone; C5H4N.CH:N.NH.C5H4N

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

Fe++ EMF KNO3 20°C 0.10M U B2=17.2 1971ANa (77705) 851

Fe++ sp oth/un 60°C 0.0 U T H 1968GGc (77706) 852

K(Fe+2HL)=14.39

K(FeHL2+H)=5.60

K(FeL2+H)=6.88

K(Fe+2HL)=17.70(5C),16.57(25C),15.59(40C).DH=-105 kJ mol⁻¹,DS=-38 J K⁻¹ m⁻¹.

K(FeHL2+H)=6.36(5 C),6.08(25 C).DH=-27,DS=38. K(FeL2+H)=7.71(5 C);DH=-26

Fe++ sp oth/un 25°C 0.0 U B2=33 1964GHd (77707) 853

K(Fe+2HL)=16.7

K(FeHL2+H)=5.68

$$K(\text{FeL2+H})=6.57$$

C11H10N4O HL (3939)
3-(2'-Hydroxyphenyl)-1-(pyrimidin-2''-yl)-1,2-diazaprop-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	alc/w	25°C	50%	U		K1=9.9 B2=18.50	1967And (77716)	854

Medium: 50% MeOH, 0.1 M NaClO4

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	25°C	3.0M	U		K1=3.92 B2=7.39 B3=9.5	1970Wla (78202)	855

Fe++	gl	KCl	20°C	1.0M	U	T	K1=3.43	1959PEc (78203)	856
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Fe++	gl	oth/un	20°C	0.01M	U		K2=7.6	1950ALa (78204)	857
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C11H13O4AsS H2L CAS 36198-36-4 (4870)
Bis(carboxymethyl)-2-(methylthiophenyl)arsine; (HOOCH2)2.As.C6H4.S.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	25°C	0.10M	U		K1=3.80 K(Fe+HL)=2.32	1971FPa (78744)	858

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	20°C	0.10M	C		K1=8.55	1981ANb (78882)	859

C11H14N4O5 HL CAS 56566-64-4 (2816)
Biacetylmonoxime-4-phenyl-3-thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	none	25°C	0.0	U		K1=10.146	1975CJb (78938)	860

C11H18N2O8 H4L CAS 4408-81-5 (923)
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOCH2)2N.CH2.)2.CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	20°C	0.10M	U		K1=13.42	1964LAa (79441)	861

K(Fe+HL)=6.30

C11H18N4 L CAS 78668-34-5 (6708)
3,6,9,15-Tetraazabicyclo[9.3.1]pentadeca-1(15),11,13-triene;

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

Fe++ gl KNO3 25°C 0.10M C K1=12.54 1993CDa (79618) 862

C11H20N4O6 H2L ICRF 198 CAS 108430-47-3 (8369)
N,N'-(1-Methyl-1,2-ethanediy1)bis[N-(2-amino-2-oxoethyl)glycine];

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

Fe++ gl NaCl 37°C 0.15M C K1=9.993 1982HMB (79729) 863

B(FeHL)=12.208

C11H22N4O4 H2L (6756)
1,4-Diazacycloheptane-N,N'-bis(N-methyl-acetohydroxamic acid);
C5H10N2(CH2.CO.N(OH)CH3)2

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

Fe++ sp KNO3 25°C 0.10M C 1993SEb (79842) 864

B(Fe2HL3)=36.2

C11H25N3O2 L (7052)
1,4-Dioxo-7,11,14-triazacyclohexadecane;

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

Fe++ gl KNO3 25°C 0.10M C K1=6.73 1994CDa (79939) 865

K(FeLOH+H)=7.81

C11H26N4S L CAS 80846-36-2 (720)
1-Thia-4,7,11,14-tetraazacyclohexadecane;

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

Fe++ gl NaClO4 35°C 0.20M C K1=10.29 1984KKa (80022) 866

C11H27N5 L CAS 29783-72-0 (98)
1,4,7,10,13-Pentaazacyclohexadecane; cyclo(-(NH.CH2.CH2)5.CH2-)

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

Fe++ gl NaClO4 35°C 0.20M U K1=14.57 1982KKb (80032) 867

C11H30N6 L (6595)
5-(4'-Amino-2'-azabutane)-5-methyl-3,7-diazanonane-1,9-diamine;

CH3.C(CH2.NH.CH2.CH2.NH2)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	KCl	25°C	0.50M	M		K1=13.4 K(FeL+H)=7.0	1991HLA (80059)	868
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C12H6N2Cl2 L CAS 5394-23-0 (3964)
4,7-Dichloro-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	sp	alc/w	?	100%	U		B3=12.1	1961HDA (80090)	869
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Medium: EtOH, 0.1 M acetate buffer

C12H7N2Br L CAS 40000-20-2 (2750)
5-Bromo-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	sp	KNO3	25°C	0.15M	U		K1=5.65 B2=10.78 B3=15.98	1972BOb (80119)	870
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Fe++	sp	oth/un	25°C	0.10M	U		K1=5.45 B3=19.7	1959BBa (80120)	871
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C12H7N2Cl L CAS 7089-68-1 (3965)
2-Chloro-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	sp	KCl	25°C	0.10M	U		B3=11.6	1971IGa (80130)	872
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C12H7N2Cl L CAS 1891-14-1 (3966)
4-Chloro-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	sp	oth/un	?	0.10M	U		B3=14.8	1961HDA (80132)	873
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Acetate buffer

C12H7N2Cl L CAS 4199-89-7 (2751)
5-Chloro-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	sp	KNO3	25°C	0.15M	U		K1=5.70 B2=10.72	1972BOb (80143)	874
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B3=15.87

Fe++ kin oth/un 25°C 0.10M U 1959BBa (80144) 875
B3=19.7

Fe++ sp oth/un 25°C 0.0 U 1952BGa (80145) 876
B3=19.7

Kinetics also used

C12H7N3O2 L CAS 4199-88-6 (449)
5-Nitro-1,10-phenanthroline;

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

Fe++ sp none 25°C 0.0 U T H 1978ABa (80171) 877
B3=17.39

Also at 35-107 C. DH(B3)=-136.9 kJ mol⁻¹. DS=-127.2 J K⁻¹ mol⁻¹

Fe++ sp oth/un 35°C 0.0 U T H K1=4.57 1964LAe (80172) 878
B3=14.99
B3=15.64(25 C),14.47(45 C). At 25 C:DH(B3)=-105 kJ mol⁻¹, DS=54 J K⁻¹ mol⁻¹

Fe++ sp oth/un 25°C 0.10M U K1=5.06 1959BBa (80173) 879

Fe++ sp oth/un 25°C =0 U B2=17.8 1952BGa (80174) 880

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

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

Fe++ sp none 25°C 0.0 C I 1986DSb (80427) 881
B3=20.50
K(FeL3+3H=Fe+3HL)=-5.35
Data for 0-75.8% w/w 2-PrOH/H2O. In 75.8% 2-PrOH/H2O, B3=16.12,
K(FeL3+3H=Fe+3HL)=-6.57

Fe++ sp none 25°C 0.0 U T H 1978ABa (80428) 882
B3=20.69
Also at 35-107 C. DH(B3)=-130.7 kJ mol⁻¹. DS=-41.7 J K⁻¹ mol⁻¹

Fe++ sp none 30°C 0.0 C I 1978BLb (80429) 883
B3=20.50
K(Fe+3HL=FeL3+3H)=5.35
Data for 0-87.6% w/w EtOH/H2O. In 87.6% EtOH/H2O, B3=16.13,
K(Fe+3HL=FeL3+3H)=5.03.

Fe++ dis oth/un 25°C 0.0 U M 1972ARb (80430) 884
K(FeL3+2ClO4)=2.13
K(FeL3+2I)=1.77

By conductivity: $K(\text{FeL3}+2\text{ClO4})=2.08$; $K(\text{FeL3}+2\text{I})=1.82$; $K(\text{FeL3}+2\text{NO3})=1.45$;
 $K(\text{FeL3}+2\text{Br})=1.30$; $K(\text{FeL3}+2\text{Cl})=1.34$

Fe++ sp oth/un 25°C 0.15M U K1=5.84 B2=11.20 1972B0b (80431) 885
 B3=16.45

Medium: K2SO4.

Fe++ sp mixed ? 64% U I 1966BAb (80432) 886
 B3=8.8

Medium: 64% N2H4. B3=20.2(0%), 11.3(5%), 10.5(10%), 10.1(25%), 9.15(50%)

Fe++ sp oth/un 45°C 0.0 U T H 1964LAe (80433) 887
 B3=18.77

B3=20.22(25 C), 19.58(33 C). DH(B3)=-130.8 kJ mol⁻¹, DS=-46 J K⁻¹ mol⁻¹

Fe++ cal NaNO3 20°C 0.10M U H 1963ANb (80434) 888
 DH(B3)=-137.9 kJ mol⁻¹, DS=-64.4 J K⁻¹ mol⁻¹

Fe++ sp NaNO3 20°C 0.10M U 1963ANg (80435) 889
 B3=21.3

Fe++ dis KCl 25°C 0.10M U K1=5.86 B2=11.11 1962IMa (80436) 890
 K3=10.03

Fe++ sp alc/w ? 50% U I 1961HDa (80437) 891
 B3=16.2

Medium: 50% EtOH, 0.1 M acetate buffer. B3=18.5(0% EtOH)

Fe++ sp KCl 25°C 0.01M U K1=5.85 1959BBa (80438) 892

Fe++ EMF oth/un 25°C 0.00 U K1=5 1956SSa (80439) 893
 B3=21.3
 K3=9.85

Spectrophotometry also used

Fe++ sp oth/un 25°C 0.10M U 1955IMa (80440) 894
 B3=21.15

Fe++ EMF oth/un 20°C 0.01M U 1955MCA (80441) 895
 B3=21.3

Fe++ sp oth/un 25°C 0.63M U K1=5.89 1950KLa (80442) 896
 Medium: 0.625 M H2SO4

Fe++ sp none 25°C 0.0 U 1948LKa (80443) 897
 B3=21.3

By kinetics B3=21.5

Fe++ EMF oth/un 25°C 0.01M U 1946DNa (80444) 898
 B3=21.0

 C12H8N2O HL CAS 1891-19-6 (3967)
 5-Hydroxy-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	?	0.10M	U			1961HDa (80546)	899

K(Fe+3HL)=11.7(?)

Acetate buffer.

 C12H8N2O3S HL CAS 33388-36-2 (3996)
 1,10-Phenanthroline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	mixed	?	64%	U	I		1966BAb (80547)	900

B3=8.4

Medium: 64% N2H4. B3=11.7(5%), 11.0(10%), 9.9(25%), 9.1(50%)

 C12H9N3 L CAS 65591-51-7 (2673)
 1-(2-Imidazolin-2-yl)isoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl04	25°C	1.00M	M		K1=6.14 B2=10.98	1978K0b (80619)	901

B3=16.03

 C12H9N3 L CAS 1137-68-4 (2517)
 2-(2'-Pyridyl)benzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	non-aq	20°C	100%	C	I	K1=5.47 B2= 9.83	1998ENa (80624)	902

K3=3.15

Medium: MeOH. In n50% v/v MeOH/PC, K1=5.65, K2=4.75, K3=4.30

 C12H10N4 L CAS 6957-24-0 (3373)
 Pyridine-2-carbaldehyde azine; C5H4N.CH:N.N:CH.C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	30°C	0.01M	U			1958SBa (80770)	903

K(FeL3+Fe)=2.22

 C12H10N6O4S H2L CAS 77327-19-6 (8343)
 2-[4-Amino-3-(1,2,4-triazolylazo)]naphthol-4-sulphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl04	30°C	0.10M	U	T	K1=6.43 B2=10.55	1981GMi (80781)	904

Also data for 40-50 C.

C12H11NOS HL Thionalide CAS 93-42-5 (4002)
2-Mercapto-N-(2'-naphthyl)acetamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	20°C	75%	U		K1=7.0 B2=13.7 B3=19.2	1968BKb (80817)	905

Medium: 75% dioxan, 0.1 M NaClO4

C12H11NO3 HL CAS 33273-97-1 (3380)
Ethyl-8-hydroxyquinoline-5-carboxylate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	25°C	50%	U	I	B2=16.2 B3=21.7	1958TWa (80838)	906

Medium: 50% dioxan, 0.3 M NaCl. In 75% dioxan B3=33.7

C12H12N2O HL CAS 70301-52-9 (1940)
2-(Hydroxyphenyliminomethyl)pyridine; C5H4N.CH2.NH.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	EMF	KNO3	20°C	0.10M	U		K1=7.39 B2=14.27	1978CSa (81027)	907

C12H12N2O3 HL Nalidixic acid CAS 389-08-2 (1401)
1-Ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridine-3-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	mixed	25°C	75%	U		K1=4.46	1998Sjb (81072)	908

Medium: 75% DMSO/H2O, 0.10 M NaClO4.

C12H12N4 L (3958)
1-(2'-Pyridyl)-3-(6''-methyl-2''-pyridyl)-1,2-diazaprop-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	60°C	0.0	M	TI	K1=5.51 B2=11.62	1969GGb (81116)	909

Medium: 0 corr. (5 C):K1=6.74,B2=13.06;(15 C):K1=6.55,B2=12.77;(25C):K1=6.37,
B2=12.4;(30C):K1=6.24,B2=12.22;(40C):K1=6.02,B2=11.97;(50C):K1=5.73,B2=11.79

Fe++	gl	NaNO3	60°C	0.0	M	TI		1969GGb (81117)	910
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K(FeHL2+H)=5.92

K(FeL2+H)=7.20

Medium: 0 corr. (5 C):6.31 and 7.65;(15 C):6.24 and 7.61; (25C):6.16 and 7.53
(30C):6.11 and 7.49; (40C):6.07 and 7.40; (50C):6.02 and 7.35

Fe++ gl oth/un 25°C 0.0 U B2=26 1964GHa (81118) 911
 K(FeHL2+H)=6.28
 K(FeL2+H)=7.95
 K(Fe+HL)=6.30
 K(Fe+2HL)=12.60

C12H12N4 HL (3935)
 1-(3'-Methyl-2-pyridyl)-3-(2''-pyridyl)-1,2-diazaprop-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	oth/un	25°C	0.0	U		B2=32	1964GHb (81120)	912
							K(FeHL2+H)=4.12		
							K(FeL2+H)=5.61		

By spectrophotometry: K(Fe+HL)=7.90, K(Fe+2HL)=15.60

C12H12N8B HL CAS 40250-95-1 (7937)
 Tetrakis(pyrazolyl)borate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	dis	non-aq	25°C	100%	C			2001KSb (81144)	913
							K(Fe+2HL=FeL2(org)+2H)=3.5		

Method: solvent extraction into chloroform.

K: Fe+2HL(org)=FeL2(org)+2H.

C12H13N02S L (6236)
 Diacetophenylthioamide; (CH3.CO)2CH.CS.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	sp	alc/w	25°C	60%	U		K1=4.24	1984FNa (81184)	914

Data also for 4-Cl-, 4-Br- and 3-Me- analogues

C12H13N03 HL (6219)
 Diacetylacetanilide; C6H5.NH.CO.CH(CO.CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	sp	alc/w	30°C	50%	U		K1=7.01 B2=18.89	1986BNa (81223)	915

C12H13N3 L CAS 1539-42-0 (932)
 bis-((2-Pyridyl)methyl)-amine (Di-2-picolylamine); C5H4N.CH2NHCH2.C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	KN03	20°C	0.10M	C	H	K1=6.15 B2=12.22	1977AHc (81284)	916

Calorimetry: DH1=-25.5 kJ mol⁻¹, DS1=30.1; DH(B2)=-71.5, DS(B2)=-6.3

C12H14N4 L (7104)

6,6'-Bis(aminomethyl)-2,2'-bipyridyl;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.10M	C		K1=8.94 B2=12.48 K(FeL+H)=5.08 *K(FeL)=-9.38	1995WRa (81351)	917

C12H20N2O6 H3L CAS 111652-02-9 (8144)
Azetidine-2-carboxy-1-(4-azaheptane-1,5-dicarboxylic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=9.2	1989ARa (82010)	918

C12H20N2O8 H4L CAS 61368-60-3 (3389)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	20°C	0.10M	U		K1=14.18	1966MKb (82132)	919

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	20°C	0.10M	U		K1=13.27	1964LAa (82218)	920

C12H20N2O8 H3L Mugineic acid CAS 69199-37-7 (9036)
2-Carboxy-a-[(3-carboxy-3-hydroxypropyl)amino]-b-hydroxy-1-azetidinebutanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	20°C	0.10M	U		K1=8.1	1981STc (82246)	921

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
Fe++	EMF	KCl	25°C	0.10M	U		K1=17.08 K(FeL+H)=2.13 K(FeL(OH)+H)=6.0	1971ISa (82299)	922

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
Fe++	EMF	KCl	25°C	0.10M	U			K1=15.33 K(FeL+H)=2.3 K(FeL(OH)+H)=6.1	1971ISa (82394)	923

C12H20N2O8S		H4L		TEDTA				CAS 923-74-0	(3394)	
2,2'-Thiobis(ethyliminodiethanoic acid); S(CH2.CH2.N(CH2.COOH)2)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KN03	20°C	0.10M	U			K1=11.57 K(Fe+HL)=6.91	1964ANa (82453)	924

Fe++	gl	KCl	20°C	0.10M	U			K1=11.64 K(Fe+HL)=6.57	1964PCa (82454)	925

C12H20N2O9		H4L		EEDTA				CAS 923-73-9	(2112)	
Oxa-bis(ethyleneimino)diethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2O										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	cal	KN03	25°C	0.10M	U	H			1965WHa (82530)	926
DH(K1)=-26.8 kJ mol-1, DS=192 J K-1 mol-1										

Fe++	gl	KN03	20°C	0.10M	U			K1=14.3 K(Fe+HL)=8.2	1964ANa (82531)	927

Fe++	gl	KCl	20°C	0.10M	U			K1=14.9	1964PCa (82532)	928

C12H20N4		L						(6709)		
3,7,10,16-Tetraazabicyclo[10.3.1]hexadeca-1(16),12,14-triene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KN03	25°C	0.10M	C			K1=10.76	1993CDa (82605)	929

C12H21N3O6		H3L						CAS 111769-28-9	(8145)	
Azetidine-2-carboxy-1-(4-azaheptane-1-amino-1,5-dicarboxylic acid);										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KN03	25°C	0.10M	C			K1=12.8	1989ARa (82750)	930
For racemic isomer: K1=10.2										

Fe++	gl	oth/un	25°C	0.10M	M			K1=12.1	1983BSd (82751)	931
Medium: 0.10 M KClO4.										

C12H22N2O6		H2L						(6394)		
1,7-Dioxa-4,10-diazacyclododecan-4,10-diethanoic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	R4N.X	25°C	0.10M	C		K1=11.86	1992ADa (82792)	932
Medium: 0.1 M Me4NNO3									

C12H22N2O6			H2L				(6641)		
7,10-Diaza-1,4-Dioxacyclododecane-7,10-diethanoic acid;									
Fe++	gl	R4N.X	25°C	0.10M	C		K1=11.52	1992ADa (82806)	933
Medium: 0.1 M Me4NNO3									

C12H22N4O6			H2L	ICRF	243		(5772)		
DL-NN'-Dicarboxamidomethyl-NN'-dicarboxymethyl-2,3-diaminobutane;									
Fe++	gl	NaCl	37°C	0.15M	U		K1=10.915 B(FeH-1L)=2.379 B(FeH2L2)=25.214	1985HCa (82833)	934

C12H22N4O6			H2L	ICRF	226		CAS 83266-80-2 (8370)		
N,N'-(1-Ethyl-1,2-ethanediy1)bis[N-(2-amino-2-oxoethyl)glycine];									
Fe++	gl	NaCl	37°C	0.15M	C		K1=9.66 B(FeH-1L)=2.40 B(FeHL)=11.84	1982HMb (82843)	935

C12H22N4O6			H2L	ICRF	236		(5771)		
meso-NN'-Dicarboxamidomethyl-NN'-dicarboxymethyl-2,3-diaminobutane;									
Fe++	gl	NaCl	37°C	0.15M	U		K1=7.926 B(FeH-1L)=-0.136 B(FeH2L2)=20.229	1985HCa (82851)	936

C12H23N3O5			H2L				(6393)		
1-Oxa-4,7,10-triazacyclododecan-4,10-diethanoic acid;									
Fe++	gl	R4N.X	25°C	0.10M	C		K1=14.46 B(FeHL)=16.8	1992ADa (82973)	937
Medium: 0.1 M Me4NNO3									

C12H23N3O6 H3L CAS 117659-73-1 (8147)
1-Amino-8-methyl-1,5,9-tricarboxy-4,8-diazadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=11.4	1989ARa (83000)	938

C12H26N12 L (7007)
1,10-Di(2-(5-tetraazolyl)ethyl)-1,4,7,10-tetraazadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	20°C	0.10M	U		K1=11.50	1981ESa (83970)	939

C12H26OS L CAS 2180-20-3 (5699)
S,S-Dihexylsulfoxide; C6H13.SO.C6H13

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	ISE	non-aq	25°C	100%	U		K1=5.08 B2=9.45 B3=11.38 B4=12.53 B5=13.40 B6=13.97	1986MMb (83974)	940

Medium: acetone, Bu4NC104

C12H27P L CAS 998-40-3 (170)
Tri-n-butylphosphine; (CH3.(CH2)3)3P

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	non-aq	25°C	100%	U	M	K(FeA+L)=5.49	1980ELa (84134)	941

Medium: toluene. A="Homologous capped" porphyrin

C13H7N3 L CAS 1082-19-5 (4008)
4-Cyano-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	alc/w	?	100%	U		B3=15.1	1961HDa (84470)	942

Medium: EtOH, 0.1 M acetate buffer

C13H8O4 H2L (8694)
4,5-Dihydroxyxanthone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	37°C	dil	C			2001Kwa (84508)	943

$$K(2\text{FeA}+\text{L})=5.3$$

Medium: 0.02 M phosphate buffer, pH 5.8. FeA is heme.

C13H9NOS HL CAS 3411-95-8 (1683)

2-(2-Hydroxyphenyl)benzothiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	25°C	50%	U		K1=9.20 B2=16.03	1954CFa (84551)	944

C13H9NO2BrCl HL CAS 104614-71-3 (9109)

4-Bromo-N-(3-chlorophenyl)-N-hydroxybenzamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	25°C	50%	C	M	K1=6.68 B(Fe(gly)L)=12.25	2001AMc (84576)	945

Medium: 50% v/v dioxane/H2O

C13H9NO2ClF HL CAS 104614-72-4 (9107)

N-(3-Chlorophenyl)-4-fluoro-N-hydroxybenzamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	25°C	50%	C	M	K1=6.92 B(Fe(gly)L)=12.73	2001AMc (84584)	946

Medium: 50% v/v dioxane/H2O

C13H9NO2Cl2 HL CAS 67201-86-9 (9108)

4-Chloro-N-(3-chlorophenyl)-N-hydroxybenzamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	25°C	50%	C	M	K1=6.72 B(Fe(gly)L)=12.33	2001AMc (84592)	947

Medium: 50% v/v dioxane/H2O

C13H9N2Cl L CAS 98068-36-1 (4011)

4-Chloro-2-methyl-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	alc/w	?	0.10M	U		B2=4.9	1961HDa (84599)	948

Medium: EtOH, 0.1 M acetate buffer

C13H9N3O2S L (693)

2-(2'-Benzothiazolylazo)pyrocatechol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++ sp oth/un 25°C ? U K1=20.086 1988FLa (84627) 949

C13H9N3O4S2 H2L CAS 2536-61-0 (4031)
1-(1',3'-Thiazol-2'-ylazo)-2-hydroxynaphthalene-6-sulfonic acid;

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

Fe++ gl alc/w 25°C 50% U I B2=17.3 1967NPb (84642) 950
Medium: 50% MeOH, 0.1 M NaCl04. B2(0%)=16.7

C13H10N02Cl HL CAS 78154-49-1 (5649)
N-3-Chlorophenylbenzohydroxamic acid;

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

Fe++ gl diox/w 25°C 50% C M K1=7.07 2001AMc (84736) 951
B(Fe(gly)L)=13.93

Medium: 50% v/v dioxane/H2O

Fe++ gl diox/w 25°C 50% U K1=6.02 B2=11.06 1989PMb (84737) 952

C13H10N2 L CAS 3002-77-5 (3400)
2-Methyl-1,10-phenanthroline;

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

Fe++ gl KCl 25°C 0.10M U K1=4.2 B2=7.9 1953ICa (84780) 953
K3=2.9

C13H10N2 L CAS 3003-78-6 (2752)
5-Methyl-1,10-phenanthroline;

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

Fe++ sp KNO3 25°C 0.15M U K1=5.95 B2=11.45 1972BOb (84809) 954
B3=16.55

Fe++ sp oth/un 22°C 0.0 U T H K1=6.11 1967LAe (84810) 955

B3=21.33

B3=21.87(25 C),20.25(35 C),19.45(45 C). DH(B3)=-141 kJ mol⁻¹,DS=-71 J K⁻¹m⁻¹

Fe++ dis KCl 25°C 0.10M U K1=6.46 B2=13.5 1962MBa (84811) 956
B3=21.94

Fe++ sp oth/un 25°C 0.10M U K1=6.05 1959BBa (84812) 957

B3=22.3

Fe++ gl oth/un 20°C =0 U 1952BGa (84813) 958

B3=22.3

C13H10N2O L Pyocyanine CAS 83-06-5 (2186)
Pyocyanine;

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

Fe++ sp non-aq 25°C 100% U K1=3.6 1978MSc (84837) 959

Medium: DMSO

C13H10N2O3 HL CAS 19357-10-9 (9111)

N-(2-Pyridyl)-2-carboxybenzamide;

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

Fe++ gl mixed 25°C 40% U K1=5.87 B2=10.32 2002GSa (84861) 960

Medium: 40% v/v DMF/H2O, 0.1 M NaClO4.

C13H11NO HL CAS 779-84-0 (3406)

N-Salicylideneaniline; HO.C6H4.CH:N.C6H5

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

Fe++ gl diox/w 27°C 50% U K1=8.51 B2=14.36 1972SDb (85035) 961

Medium: 50% dioxan, 0.1 M NaClO4

C13H11NO2 H2L CAS 78-75-2 (6258)

3-(Salicylideneamino)phenol; HO.C6H4.CH:N.C6H4.OH

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

Fe++ gl alc/w 25°C 50% U K1=7.15 B2=12.85 1977DWa (85084) 962

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

Fe++ vlt non-aq 25°C 100% C 1992SSe (85146) 963

B3=14.0

Medium: acetonitrile, 0.20 M Et4NPF6. Method: cyclic voltammetry.

C13H11N3O2 HL (4985)

2- or 4-Hydroxybenzaldehyde isonicotinylhydrazone;

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

Fe++ kin KCl 25°C 0.20M C 1992DFa (85271) 964

K(Fe+H2L)=5.93

K(FeH2L+H2L)=5.3

Data also for the benzoyl hydrazone. K(Fe+H2L)=6.03, K(FeH2L+H2L)=5.6

C13H11N5O2 L CAS 4453-80-9 (8115)
3-Nitro-1,5-diphenylformazan;

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

Fe++ gl diox/w 30°C 50% C T H K1=6.06 B2=10.98 2001SKb (85313) 965
Medium: 50% v/v dioxane/water, 0.1 M KCl. Data for 20-40 C.
DH(K1)=-26.4 kJ mol⁻¹, DH(K2)=-21.1.

C13H12N2O4S H2L CAS 19980-54-2 (1394)
2-Hydroxy-5-methyl-4'-sulfonato-azobenzene;

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

Fe++ sp alc/w 25°C 0.10M U K1=10.90 B2=14.52 1981MOb (85375) 966

C13H12N4S L Dithizone CAS 60-10-6 (1801)
Diphenylthiocarbazone; C6H5.NH.NH.CS.N:N.C6H5

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

Fe++ sp NaClO4 25°C 0.10M U K1=4.78 B2=8.99 1973BSe (85457) 967

C13H14NO3P H2L CAS 19316-85-7 (1466)
2-Hydroxyphenyl-N-phenylaminomethylphosphinic acid;

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

Fe++ gl NaClO4 20°C 0.10M U K1=5.20 1985SIb (85562) 968

C13H14N2O2S HL CAS 4384-37-1 (4032)
2-(4'-Methylphenylsulfonamido)aniline; CH3.C6H4.SO2.NH.C6H4.NH2

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

Fe++ gl diox/w ? 50% U K1=9.31 B2=17.45 1968BRa (85593) 969
Medium: 50% dioxan, 0.01 M

C13H14N3O5P H2L CAS 80767-75-5 (1467)
2-Hydroxy-4-nitrophenyl-N-(2-pyridylmethyl)aminomethylphosphinic acid;

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

Fe++ gl NaClO4 20°C 0.10M U K1=5.90 1985SIb (85640) 970

C13H14N3O5P H2L CAS 80767-76-6 (1468)
2-Hydroxy-4-nitrophenyl-N-(3-pyridylmethyl)aminomethylphosphinic acid;

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

Fe++ gl NaCl04 20°C 0.10M U K1=5.85 1985SIb (85653) 971

C13H15N2O3P H2L CAS 80767-72-2 (1460)
2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphinic acid;

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

Fe++ gl NaCl04 20°C 0.10M U K1=5.70 1985SIa (85780) 972

C13H15N2O3P H2L CAS 80767-73-3 (1461)
2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphinic acid;

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

Fe++ gl NaCl04 20°C 0.10M U K1=5.75 1985SIa (85793) 973

C13H15N2O3P H2L CAS 80767-74-4 (1462)
2-Hydroxyphenyl-(N-4-pyridylmethylamino)methylphosphinic acid;

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

Fe++ gl NaCl04 20°C 0.10M U K1=5.80 1985SIa (85806) 974

C13H15N2O4P H3L CAS 80767-78-8 (1463)
2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.CH2.C5H4N

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

Fe++ gl NaCl04 20°C 0.10M U K1=7.80 1985SIa (85819) 975
K(Fe+HL)=3.90

C13H15N2O4P H3L CAS 85946-85-6 (1464)
2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.CH2.C5H4N

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

Fe++ gl NaCl04 20°C 0.10M U K1=7.85 1985SIa (85832) 976
K(Fe+HL)=3.90

C13H15N2O4P H3L CAS 85946-86-7 (1465)
2-Hydroxyphenyl-(N-4-pyridylmethylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.CH2.C5H4N

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

Fe++ gl NaCl04 20°C 0.10M U K1=7.90 1985SIa (85845) 977
K(Fe+HL)=3.95

C13H15N3O2 HL CAS 16832-24-9 (6)
N3-Benzyl-L-histidine; H2N.CH(CH2.C3H2N2(CH2.C6H5))COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	none	21°C	0.0	M		K1=5.65 B2=10.24	1974YAa (85885)	978

C13H19N3O4 H2L (6689)
N,N'-((Pyridine-2,6-diyl)bis-methylene)bis-sarcosine; C5H3N(CH2.N(CH3)CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	25°C	0.10M	U		K1=10.44	1992BSb (86071)	979

C13H19N3O8 H3L b-Asp-b-Asp-Pro CAS 91921-49-2 (8149)
Pyrrolidine-2-carboxy-N-(1,5-dicarboxy-1-amino-4-azaheptane-3,7-dione);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=4.6	1989ARa (86078)	980

C13H20N04P H3L (1471)
2-Hydroxyphenyl-N-(cyclohexylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.C6H11

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	20°C	0.10M	U		K1=6.80 K(Fe+HL)=3.35	1985SIb (86090)	981

C13H22N2O8 H4L CAS 1798-14-7 (921)
(Pentamethylenedinitrilo)tetraethanoic acid; ((HOOCH2)2N.CH2.CH2)2CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	20°C	0.10M	U		K1=10.8 K(Fe+HL)=6.4	1964ANa (86194)	982

C13H22N4 L (6710)
3,7,11,17-Tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=9.34 K(Fe(OH)L+H)=10.91	1993CDa (86323)	983

C13H24N2O6 H2L (5610)
1,11-Dioxa-4,8-diazacyclotridecane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Medium: 0.10 M Me₄NNO₃.

C₁₄H₈N₄O₄Cl₂S H₂L (6672)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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$$B(\text{Fe}+2\text{HL})=27.74$$

3-Amino-1,2-dihydroxyanthraquinone;

$$B(\text{FeLA})=13.10$$

B(FeLA)=11.75, H2A=sulfosalicylic acid

C14H12NO2Cl HL CAS 67055-92-9 (6301)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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$$B(\text{Fe(gly)}\text{L})=13.59$$

Data also for 4-fluoro, 4-chloro, 4-bromo, 4-nitro and 4-methoxy analogues

C₁₄H₁₂N₃O₃Cl HL CAS 67135-47-1 (9106)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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$$B(\text{Fe(gly)}\text{L})=13.80$$

2,9-Dimethyl-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ dis KCl 25°C 0.10M U K1=<4 1962IMa (87130) 990

 C14H12N2 L CAS 3248-05-3 (3427)
 4,7-Dimethyl-1,10-phenanthroline;

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

 Fe++ sp oth/un 25°C 0.10M U K1=5.60 1963BMb (87146) 991

 C14H12N2 L CAS 3002-81-1 (451)
 5,6-Dimethyl-1,10-phenanthroline;

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

 Fe++ sp KCl 33°C 0.10M U K1=6.15 1968LAa (87158) 992

 Fe++ sp oth/un 25°C 0.0 U T 1968LAa (87159) 993
 B3=21.97
 Medium: acetate and phosphate buffers. B3(33 C)=21.37, B3(40 C)=20.90,
 B3(45 C)=20.60

 Fe++ sp oth/un 25°C 0.10M U K1=6.37 1963BMb (87160) 994

 C14H12N2O3 H2L CAS 28547-20-8 (1395)
 2-Hydroxy-5-methyl-4'-carboxy-azobenzene; (HO)(CH3)C6H3.N:N.C6H4.CO0H

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

 Fe++ sp alc/w 25°C 0.10M U K1=10.90 B2=14.27 1981MOb (87231) 995

 C14H12O3 HL Benzilic acid CAS 76-93-7 (710)
 Diphenylglycolic acid, (benzilic acid); (C6H5)2C(OH).CO0H

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

 Fe++ sp oth/un ? ? U K1=6.2 1976SCb (87349) 996

 C14H13NO HL CAS 3246-73-9 (5056)
 N-(Salicylidene)-2-methylaniline; CH3.C6H4.N:CH.C6H4.OH

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

 Fe++ gl diox/w 27°C 50% U K1=8.63 1972SDb (87368) 997
 Medium: 50% dioxan, 0.1 M NaClO4

 C14H13NO HL CAS 952-81-8 (5057)
 N-(Salicylidene)-3-methylaniline; CH3.C6H4.N:CH.C6H4.OH

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

Fe++ gl diox/w 27°C 50% U K1=7.88 1972Sdb (87375) 998
Medium: 50% dioxan, 0.1 M NaClO4

C14H13NO HL CAS 982-76-3 (5058)

N-(Salicylidene)-4-methylaniline; CH3.C6H4.N:CH.C6H4.OH

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

Fe++ gl diox/w 27°C 50% U K1=7.33 1972Sdb (87385) 999

Medium: 50% dioxan, 0.1 M NaClO4

C14H13NO2 HL CAS 889-29-2 (6259)

N-Salicylidene-3-methoxyaniline; HO.C6H4.CH:N.C6H4.OCH3

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

Fe++ gl alc/w 25°C 50% U K1=5.55 B2=10.20 1977DWa (87527)1000

C14H13N5O5 HL (5394)

1-(2-Pyridylmethyldeneamino)-3-(salicylideneamino)thiourea;

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

Fe++ sp mixed 25°C 40% U 1985RGa (87614)1001

K1eff=4.25

Medium: 40% DMF, pH 4.5

C14H13N5O2 HL (5393)

1-(2-Pyridylmethyldeneamino)-3-(salicylideneamino)urea;

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

Fe++ sp mixed 25°C 32% U 1985RGa (87623)1002

K1eff=4.3

Medium: 32% DMF, pH 4.5

C14H14N4O3 HL CAS 82845-52-1 (6626)

Pyridoxal isonicotinoylhydrazone;

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

Fe++ kin KCl 25°C 0.20M C 1992DFa (87698)1003

K(Fe+H2L)=5.11

K(FeH2L+H2L)=5.00

Data also for the benzoyl hydrazone. K(Fe+H2L)=5.00, K(FeH2L+H2L)=4.9

Fe++ sp KNO3 25°C 0.10M U 1990VHa (87699)1004

K(Fe+2H2L=FeH4L2)=6.98

K(Fe+2HL=FeH2L2)=12.47

Medium: succinic-succinate buffer

C14H16NO3P H2L CAS 25881-35-0 (1469)
Phenyl-N-(benzylamino)methylphosphonic acid; C6H5.CH(PO3H2).NH.CH2.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl04	20°C	0.10M	U		K1=6.50 K(Fe+HL)=3.10	1985SIb (87809)	1005

C14H16NO4P H3L CAS 61146-25-6 (1470)
2-Hydroxyphenyl-N-(benzylamino)methylphosphonic acid; C6H4(OH)CH(PO3H2).NH.CH2.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl04	20°C	0.10M	U		K1=6.90 K(Fe+HL)=3.50	1985SIb (87822)	1006

C14H16NO3+ HL (5071)
2-(Trimethylammoniummethylcarbonyl)-1,3-indanedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	25°C	0.02M	U		K1=6.05	1971BMd (87829)	1007

Medium: 0.02 M HL, 0.02 M Mohr's salt

C14H16N2O8 H4L CAS 40774-59-2 (1901)
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl04	25°C	1.00M	C		K(FeL+H)=2.41	1985NKa (87950)	1008

C14H16N4O3++ L Toxogonine (6013)
1,1'-Oxydimethylene-bis(4-pyridinium aldoxime) dianion; O(CH2.NC5H4.CH:NOH)2++

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	23°C	0.05M	U		Keff(FeAP+L)=3.87 Keff(FeNP+L)=3.45	1986BHb (88023)	1009

At pH 6-7 (FeAP) and >11.8 (FeNP). FeAP=amminopentacyanoferrate(II) and FeNP=nitrosylpentacyanoferrate(II). Data also for the trimethylene analogue

C14H17N2O4P H3L (1472)
2-Hydroxyphenyl-N-(2-(2'-pyridyl)ethylamino)methylphosphonic acid; C6H4(OH)CH(PO3H2)NHCH2CH2C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++ gl NaCl04 20°C 0.10M U K1=7.75 1985SIb (88042)1010
K(Fe+HL)=3.60

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

Fe++ gl NaCl04 25°C 1.00M C 1983AHa (88645)1011
K(FeL+H)=2.88

Fe++ vlt oth/un 18°C 0.20M U T 1972BOa (88646)1012
K(Fe+HL)=9.30
K(Fe+H2L)=6.38

At 28 C: values are: 9.32, 6.30; 35 C: 9.26, 6.32; 40 C: 9.26, 6.28

Fe++ cal KNO3 25°C 1.0M U H 1965WHa (88647)1013
DH(K1)=-27.6 kJ mol⁻¹, DS=255 J K⁻¹ mol⁻¹

Fe++ vlt NaCl04 30°C 1.0M U K1=16.27 1963RSa (88648)1014

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

Fe++ EMF NaCl04 20°C 1.00M C 2000BMa (89232)1015
K(Fe+CrL)=4.95

Method: Pt/Fe+++ / Fe++ and glass electrodes.

Fe++ EMF NaCl04 25°C 1.00M U K1=17.0 1985PLb (89233)1016
K(Fe+HL)=12.5

Fe++ cal KNO3 25°C 0.10M U H 1965WHa (89234)1017
DH(K1)=-32.2 kJ mol⁻¹, DS=205 J K⁻¹ mol⁻¹

Fe++ EMF oth/un 20°C 0.10M U K1=15.97 1959AND (89235)1018
K(FeL+Fe)=2.98
K(Fe+HL)=10.71

Fe++ gl KNO3 25°C 0.10M U K1=16.5 1959VCa (89236)1019
K(FeL+H)=5.30
K(FeL+OH)=5.01
K(FeLOH+OH)=4.37

Fe++ gl oth/un 20°C 0.10M U K1=16.55 1958DRa (89237)1020

C14H24N2O7 H3L (3440)

N-(2-Hydroxycyclohexyl)ethylenediamine-N,N',N'-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	25°C	0.10M	U		K1=13.24	1960SAc (89493)	1021

C14H24N2O8		H4L		HMDTA			CAS 1633-00-7 (920)		
1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((H00C.CH2)2N.CH2.CH2.CH2)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	20°C	0.10M	U		K1=11.0 K(Fe+HL)=6.6	1964ANa (89574)	1022

C14H24N2O8		H4L		EDTP			(2936)		
Diaminoethane-N,N,N',N'-tetrapropanoic acid; (H00C.CH2CH2)2N.CH2CH2.N(CH2CH2.COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	30°C	0.10M	U		K1=6.2	1953CCb (89681)	1023

C14H24N2O10				EGTA			CAS 67-42-5 (349)		
Ethyleneglycol-0,0'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	cal	KNO3	25°C	0.10M	U	H		1965WHa (89861)	1024
DH(K1)=-21.7 kJ mol-1, DS=154.7 J K-1 mol-1									
Fe++	gl	KNO3	20°C	0.10M	U		K1=11.81 K(Fe+HL)=6.4	1964ANa (89862)	1025

Fe++	gl	KNO3	20°C	0.10M	U		K1=11.92 K(Fe+HL)=6.93	1963FCa (89863)	1026

C14H25N3O6		H3L					(8146)		
Azetidine-2-carboxy-1-(1-amino-5-azadecane-1,6-dicarboxylic acid);									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=6.6	1989ARa (90069)	1027

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
Fe++	gl	R4N.X	25°C	0.10M	U		K1=16.55 K(Fe+HL)=8.94	1988ADa (90082)	1028

C14H25N5		L					CAS 80251-43-0 (5459)		
3,6,10,13,19-Pentaazabicyclo[13.3.1]nonadecane-1(19),15,17-triene;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	35°C	0.20M	U	M	K1=10.76	1982KKb (90129)	1029
Ternary complex with O2									

C14H26N2O7		H2L					(1567)		
1,4,10-Trioxa-7,13-diazacyclopentadecane-N,N'-diethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	cal	R4N.X	25°C	0.10M	U	H		1989DSa (90188)	1030
DH(FeL)=-14.6 kJ mol-1; DS=197; (estimated values).									
Fe++	gl	R4N.X	25°C	0.10M	C		K1=13.0?	1987DDb (90189)	1031

C14H30N4O2		H2L					(316)		
4,4,9,9-Tetramethyl-5,8-diazadodecane-2,11-dione dioxime;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl	25°C	0.10M	C			1978PRa (90672)	1032
							K(Fe+H2L=FeHL+H)=-3.51		
							K(Fe+HL)=8.8		

C14H36N6		L	TAPEN				CAS 4879-98-5 (5715)		
N,N,N',N'-Tetrakis(3-aminopropyl)diaminoethane; (-CH2.N(CH2.CH2.CH2.NH2)2)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.50M	M		K1=7.92	1986GMa (90898)	1033
							B(FeHL)=17.48		
							B(FeH2L)=26.26		

C14H37N7		L					CAS 298-85-5 (5606)		
1,4,7,10,13,16,19-Heptaazacycloheneicosane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaClO4	25°C	0.15M	C	M		1992ABa (90912)	1034
							K(FeA+3H+L)=31.03		
							K(FeA+4H+L)=39.15		
							K(FeA+5H+L)=44.39		
							K(FeA+H3L)=3.4		
K(FeA+H4L)=5.1, K(FeA+H5L)=6.6. FeA=Fe(CN)6----									

Fe++	gl	NaClO4	25°C	0.15M	C		K1=12.09	1991BBa (90913)	1035
							B(FeHL)=17.73		
							K(FeL+H)=5.64		
							K(Fe+HL)=7.97		

C14H37N7 L (6456)
2,5,8,11,14,17,20-Heptaazaheneicosane; CH3.(NH.(CH2)2)6.NH.CH3

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

Fe++ gl NaCl04 25°C 0.15M C M 1992ABa (90926)1036
K(FeA+4H+L)=40.40
K(FeA+5H+L)=46.45
K(FeA+6H+L)=50.92
K(FeA+H4L)=3.6

K(FeA+H5L)=4.9, K(FeA+H6L)=6.0, K(FeA+H7L)=6.9, B(FeA+7H+L)=54.3.

FeA=Fe(CN)6----.

C15H9N3O4Cl2S H2L (6673)
1-((3,5-Dichloro-2-pyridyl)azo)-2-hydroxynaphthalene-4-sulfonic acid;

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

Fe++ vlt KNO3 25°C 0.10M U B2=34.14 1993HKa (90936)1037
For 3,5-dibromo analogue B2=34.08. For 3,5-dichloro...-1-hydroxynaphthalene-
analogue B2=25.85, 3,5-dibromo analogue K=25.81

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

Fe++ sp non-aq 25°C 100M C 2001ADb (91021)1038
K1eff=-0.82

Medium: MeOH, 0.2 M acetate buffer, pH 5.0. K1eff: Al+HnL=All

C15H11N3 L CAS 1148-79-4 (488)
2,2':6'2''-Terpyridine; C5H4N.C5H3N.C5H4N

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

Fe++ sp oth/un 23°C 0.50M U M B2=21.26 1984SWa (91154)1039

Fe++ sp NaCl 25°C 0.10M U T H B2=20.4 1981BSa (91155)1040
DH(B2)=-113 kJ mol-1; DS(B2)=-13 J K-1 mol-1

Fe++ kin oth/un 25°C var U K1=7.1 B2=20.9 1966HHa (91156)1041

Fe++ sp oth/un 23°C 0.10M U 1956MLa (91157)1042
B(FeH2L2)=20.4

Fe++ sp oth/un ? 0.10M U B2=18.0 1954BWa (91158)1043
K(Fe+2H2L=FeL2+4H)=3.7

C15H11N3O4S H2L (5130)

7-Phenylazo-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	vlt	KN03	25°C	0.10M	U			K1=13.76	1993HKa (91336)	1044
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For 4-chlorophenyl analogue K=13.49

C15H11N3O7S2 H3L CAS 17852-90-3 (5131)

7-(4-Sulfophenylazo)-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	sp	NaCl04	25°C	0.10M	U			K1=9.70	1993HKb (91349)	1045
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C15H11N3O8S2 H4L (6674)

7-((2-Hydroxy-5-sulfophenyl)azo)-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	sp	NaCl04	25°C	0.10M	U				1993HKb (91357)	1046
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K(Fe+HL)=10.73

C15H12N2O3 HL CAS 86443-19-8 (4065)

Ethyl 4-hydroxy-1,10-phenanthroline-3-carboxylate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	sp	alc/w	?	100%	U				1961HDa (91439)	1047
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K(Fe+3HL)=13.0(?)

Medium: EtOH, 0.1 M acetate buffer

C15H12N4 L (4056)

2-Picolinaldehyde 2'-quinolylhydrazone; C5H4N.CH:N.NH.C9H6N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	gl	diox/w	25°C	50%	U			K1=10.44 B2=20.62	1965HRa (91453)	1048
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C15H12O2 HL Diphenylacac CAS 120-46-7 (362)

1,3-Diphenylpropane-1,3-dione, Dibenzoylmethane; C6H5.CO.CH2.CO.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++	gl	diox/w	30°C	75%	U			K1=11.15 B2=21.50	1953UFe (91547)	1049
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C15H14NO3Cl HL CAS 113581-14-9 (9105)

N-(3-Chlorophenyl)-4-ethoxy-N-hydroxybenzamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ gl diox/w 25°C 50% C M K1=7.65 2001AMc (91704)1050
B(Fe(gly)L)=14.17

Medium: 50% v/v dioxane/H2O

C15H14N2O2 HL (1393)
2-Hydroxy-5-methyl-4'-acetyl-azo-benzene; (HO)(CH3).C6H3.N:N.C6H4.CO.CH3

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

Fe++ sp alc/w 25°C 0.10M U K1=10.30 B2=14.04 1981MOb (91713)1051

C15H16N2O2 HL CAS 7397-15-1 (6853)
Peonolphenylhydrazone;

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

Fe++ gl diox/w 20°C 75% U T K1=13.58 B2=26.76 1991NNa (91925)1052
30 C: K1=13.28, K2=12.92; 40 C: K1=13.15, K2=12.53

C15H17N4OBr HL CAS 14357-53-2 (712)
2-(5-Bromo-2-pyridylazo)-5-diethylaminophenol; BrC5H3N.N:N.C6H3(OH)N(CH3)2

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

Fe++ sp KCl 25°C ? U B2=10.67 1988WSa (91979)1053

C15H23N3O4 HL (5972)
2,6-Bis(3-carboxy-1,2-dimethyl-2-azapropyl)pyridine;

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

Fe++ oth oth/un 25°C 0.10M U K1=11.93 1988BPa (92296)1054
Data also for 3-carboxy-azabutyl and 3-carboxy-4-methyl-2-azapentyl ligands.

C15H23N3O4 H2L (6690)
N,N'-((Pyridine-2,6-diyl)bis-methylene)bis-N-methylalanine;
C5H3N(CH2.N(CH3)CH(CH3)COOH)2

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

Fe++ gl NaNO3 25°C 0.10M U K1=10.84 1992BSb (92301)1055

C15H23N3O8 H3L g-Glu-g-Glu-Pro CAS 91921-50-5 (8150)
2-Carboxypyrrolidine-N-(1,6-dicarboxy-1-amino-5-azanonane-4,9-dione);

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

Fe++ gl KNO3 25°C 0.10M C K1=4.4 1989ARa (92310)1056

C15H27N3O6 H3L CAS 96287-34-2 (8148)
Pyrrolidine-2-carboxy-N-(1-amino-1,6-dicarboxy-5-azanonane);

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

Fe++ gl KNO3 25°C 0.10M C K1=6.6 1989ARa (92470)1057

C16H9N2OBr3 HL CAS 84317-74-8 (5169)
1-(2,4,6-Tribromophenylazo)-2-hydroxynaphthalene;

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

Fe++ gl mixed 25°C 75% U K1=6.34 1972MCb (92652)1058
Medium: 75% acetone, 0.1 M KNO3

C16H10N4O8S2 H2L Ferene CAS 79551-14-7 (5410)
3-(2-Pyridyl)-5,6-bis(2-(5-furyl sulfonic acid)-1,2,4-triazine;

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

Fe++ sp none 25°C 0.0 U B3=14.9 1984HRa (92680)1059

C16H11N2OBr HL CAS 7150-24-5 (5172)
1-(4-Bromophenylazo)-2-hydroxynaphthalene;

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

Fe++ gl mixed 25°C 75% U K1=7.13 B2=13.67 1972MCb (92698)1060
Medium: 75% acetone, 0.1 M KNO3

C16H11N2OCl HL CAS 24390-65-6 (5170)
1-(2-Chlorophenylazo)-2-hydroxynaphthalene;

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

Fe++ gl mixed 25°C 75% U K1=6.75 B2=12.56 1972MCb (92713)1061
Medium: 75% acetone, 0.1 M KNO3

C16H11N2OCl HL CAS 10149-93-6 (5171)
1-(4-Chlorophenylazo)-2-hydroxynaphthalene;

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

Fe++ gl mixed 25°C 75% U K1=7.04 B2=13.50 1972MCb (92728)1062
Medium: 75% acetone, 0.1 M KNO3

C16H11N2OI HL CAS 25023-35-2 (5173)
1-(4-Iodophenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	mixed	25°C	75%	U		K1=7.36 B2=14.07	1972MCb (92743)	1063
Medium: 75% acetone, 0.1 M KNO3									

C16H11N2O2Cl		H2L					CAS 3566-94-7	(3474)	
1-(5-Chloro-2-hydroxyphenylazo)-2-hydroxynaphthalene;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	30°C	75%	U		K1=18.01	1952SNa (92760)	1064

C16H11N3O3		HL					CAS 6410-09-9	(5151)	
1-(2-Nitrophenylazo)-2-hydroxynaphthalene;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	mixed	25°C	75%	U		K1=4.42	1972MCb (92797)	1065
Medium: 75% acetone, 0.1 M KNO3									

C16H11N3O3		HL					CAS 6410-46-1	(5152)	
1-(4-Nitrophenylazo)-2-hydroxynaphthalene;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	mixed	25°C	75%	U		K1=5.32 B2=10.01	1972MCb (92812)	1066
Medium: 75% acetone, 0.1 M KNO3									

C16H11N3O3S		HL					CAS 35778-69-9	(4090)	
Diphenylthiovioluric acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	diox/w	?	33%	U		B2=5.20	1960SBa (92825)	1067
Medium: 33% dioxan, 0.2 M KNO3									

C16H11N3O4		HL					(2910)		
1,3-Diphenyl-5-hydroxyimino-hexahydropyrimidine-2,4,6-trione;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	30°C	75%	C		K1=5.82 B2=11.19	1978MGb (92834)	1068

C16H12N2O		HL					CAS 842-07-9	(5156)	
1-Phenylazo-2-hydroxynaphthalene;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	mixed	25°C	75%	U		K1=8.88 B2=16.94	1972MCb (92918)	1069
Medium: 75% acetone, 0.1 M KNO3									

C16H12N2O2 H2L CAS 9486-98-2 (3462)
1-(2-Hydroxyphenylazo)-2-hydroxynaphthalene;

Fe++	gl	mixed	25°C	75%	U	1972MCb (92952)1070
						K(Fe+HL)=11.96
						K(FeHL+HL)=11.25

1-(4-Hydroxyphenylazo)-2-hydroxynaphthalene;

$$\begin{aligned} K(\text{Fe}+\text{HL}) &= 11.24 \\ K(\text{FeHL}+\text{HL}) &= 10.90 \end{aligned}$$

1-(4-Sulfophenylazo)-2-hydroxynaphthalene;

Medium: 75% acetone, 0.1 M KNO_3

1-((2-Hydroxy-5-sulphophenyl)azo)-2-hydroxynaphthalene-6-sulfonic acid;

2-((2-Hydroxy-5-sulfophenyl)azo)-1-hydroxynaphthalene-4-sulfonic acid;

2,2'-Dipyridylketone-2-pyridylhydrazone; C₅H₄N.NH.N:C(C₅H₄N)₂

$$K(\text{Fe}+2\text{HL})=5.25$$

C16H13N5O4 HL CAS 75272-98-9 (8459)
2,4-Dihydro-4-[(2-hydroxyphenyl)azo]-5-methyl-2-(4-nitrophenyl)-3H-pyrazol-3-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	alc/w	25°C	70%	U		K1=13.89 B2=25.40	1994RAb (93391)	1076

Medium: 70% v/v EtOH/H2O, 0.1 M NaCl.

C16H14N2O HL (1318)
2-(2-Hydroxynaphthyliminomethyl)pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	diox/w	25°C	50%	A		K1=7.81 B2=14.66	1981RUa (93412)	1077

Medium: 50% dioxan, 0.1 M NaClO4

C16H16N2O4 H2L CAS 1762-46-5 (4084)
Diethyl 2,2'-bipyridyl-5,5'-dicarboxylate; (CH3.CH2O.CO.C5H3N.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	diox/w	?	75%	U		K1=2.5 B2=4.5 B3=6.5	1961JPa (93692)	1078

Medium: 75% dioxan, 0.1 M H2SO4

C16H18N2O4S HL Penicillin G CAS 69-57-8 (942)
Benzylpenicillin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	mixed	30°C	50%	U		K1=5.04 B2=9.40	1980TSa (93806)	1079

Medium: 50% v/v acetone/H2O

C16H18N2O5S HL Penicillin V CAS 87-08-1 (943)
Phenoxyethylpenicillinic acid, 4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	mixed	30°C	50%	U		K1=4.40 B2=8.37	1980TSa (93816)	1080

Medium: 50% v/v acetone/H2O

C16H22N2O8P2 H6L CAS 20708-36-5 (5194)
2,2'-(Ethylenedi-imino)bis(2-hydroxybenzylphosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	EMF	KCl	?	0.10M	U		K1=25.0 K(Fe+H2L)=17.45	1968MRc (94162)	1081

C16H22N4O L (3471)
2-(N-(2-Dimethylaminoethyl)-N-(4-methoxybenzyl)amino)pyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.06M	U	T	K1=5.65 B2=9.39	1961SMa	(94197)1082
K1=6.30(0 C), 5.25(45 C)									

C16H28N2O8 H4L (2850)
1,8-Diaminooctane-N,N,N',N'-tetraethanoic acid; ((HOOCC₂H₄)₂N(CH₂)₄)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO ₃	20°C	0.10M	U		K1=10.96	1964ANa	(94791)1083
							K(Fe+HL)=6.71		

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
Fe++	gl	R4N.X	25°C	0.10M	C		K1=20.22	1992CDd	(94893)1084
							B(FeHL)=24.48		

Medium: 0.10 M Me₄NNO₃.

C16H30N2O8 H2L CAS 72912-01-7 (1568)
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	R4N.X	25°C	0.10M	C	H	K1=7.88	1989DSa	(95040)1085
By calorimetry: DH(FeL)=0.5 kJ mol ⁻¹ ; DS=150; (estimated values).									

C16H34O₅ L CAS 1986-89-6 (5700)
S,S-Dioctylsulfoxide; C₈H₁₇.SO.C₈H₁₇

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	ISE	non-aq	25°C	100%	U		K1=5.16 B2=9.54	1986MMb	(95482)1086
							B3=11.50		
							B4=12.75		
							B5=13.64		
							B6=14.13		

Medium: acetone, Bu₄NC₁₀

C16H35O₂P HL CAS 13525-99-0 (2135)
Di(2-ethylhexyl)phosphinic acid; (2-C₂H₅C₆H₁₂)₂P(O)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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C17H12N2O3 H2L (2040)
1-(2-Carboxyphenylazo)-2-hydroxynaphthalene; H00C.C6H4.N:N.C10H6.OH

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

Fe++ gl NaCl04 25°C 0.01M U K1=6.78 1981GMe (95702)1092

C17H13NO3S H2L CAS 119516-70-0 (6185)
7-Hydroxy-8((2-mercaptophenyl)iminomethyl)-4-methyl-2H-1-benzopyran-2-one;

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

Fe++ gl diox/w 20°C 70% U T H K1=15.37 1988K0b (95748)1093

25 C:K=14.97; 32 C: K=14.45; 45 C:K=13.48. DH=-133.5 kJ mol⁻¹, DS=-161

C17H13N5O5 HL CAS 158728-44-0 (8460)
2-[[4,5-Dihydro-3-methyl-1-(4-nitrophenyl)-5-oxo-1H-pyrazol-4-yl]azo]benzoic acid;

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

Fe++ gl alc/w 25°C 70% U K1=20.04 B2=33.04 1994RAb (95782)1094

Medium: 70% v/v EtOH/H2O, 0.1 M NaCl.

C17H14N2O HL CAS 2046-17-5 (5214)
1-(2-Methylphenylazo)-2-hydroxynaphthalene;

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

Fe++ gl mixed 25°C 75% U K1=9.45 B2=17.80 1972MCb (95795)1095

Medium: 75% acetone, 0.1 M KNO₃

C17H14N2O HL CAS 6756-41-8 (5215)
1-(4-Methylphenylazo)-2-hydroxynaphthalene;

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

Fe++ gl mixed 25°C 75% U K1=9.62 B2=18.46 1972MCb (95810)1096

Medium: 75% acetone, 0.1 M KNO₃

C17H14N2O2 HL CAS 1229-55-6 (5216)
1-(2-Methoxyphenylazo)-2-hydroxynaphthalene;

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

Fe++ gl mixed 25°C 75% U K1=11.84 B2=22.87 1972MCb (95829)1097

Medium: 75% acetone, 0.1 M KNO₃

C17H14N2O2 HL CAS 13441-91-1 (5217)
1-(4-Methoxyphenylazo)-2-hydroxynaphthalene;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       gl  mixed  25°C  75%  U          K1=11.42  B2=22.14  1972Mcb (95844)1098
Medium: 75% acetone, 0.1 M KNO3
*****
C17H16N4O2S          HL          CAS 202867-34-3 (7313)
2-[2-(5-Methylbenzothiazolyl)azo]-5-dimethylaminobenzoic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       sp  alc/w   RT    16%  C          B2eff=10.79  1998FZa (96109)1099
Medium: 16% EtOH/H2O, 0.5% sodium dodecyl sulfate.
*****
C17H19N3           L    Antazoline      CAS 91-75-8 (3486)
2-(N-(Benzyl)-N-phenylaminomethyl)-1,4,5H-1,3-diazole, antistine;
C3H5N2.CH2.N(C6H5)CH2.C6H5
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       gl  KCl    25°C  0.06M U T      K1=6.45      1961SMa (96264)1100
K1=7.40(0 C), 6.12(45 C)
*****
C17H20N4O6          HL    Riboflavin      CAS 83-88-5 (1438)
7,8-Dimethyl-10(D-1'-ribityl)isoalloxazine, Vitamin B2, Vitamin H
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       gl  oth/un 20°C  0.01M U      K1=7.1      1953ALa (96336)1101
*****
C17H21NO           L    Benadryl      CAS 58-73-1 (3492)
N,N-Dimethyl-2-(diphenylmethoxy)ethylamine;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       gl  KCl    25°C  .058M U T      K1=5.85  B2=9.74  1961SMa (96371)1102
K1=6.05(0 C), 5.50(45 C)
*****
C17H22N03+          HL          (5224)
2-(Triethylammoniummethylcarbonyl)-1,3-indanedione;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++       gl  oth/un 25°C  0.02M U      K1=6.22      1971BMd (96397)1103
Medium: 0.02 M HL, 0.02 M Mohr's salt
*****
C17H23N3O4          H2L          (6691)
N,N'-((Pyridine-2,6-diyl)bis-methylene)bis-proline;
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	25°C	0.10M	U		K1=12.68	1992BSb (96411)	1104

C17H25N5O2		L		Prizidilol			CAS 73793-66-5	(8367)	
3-[2-(-t-Butylamino-2-hydroxypropoxy)phenyl]-6-hydrazinopyridazine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaCl	37°C	0.15M	U		B(FeHL)=12.737	1984AMb (96479)	1105

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=17.56 B(FeHL)=21.94	1992CDd (96647)	1106

C18H12N2		L					CAS 6135-89-5	(3498)	
5-Phenyl-1,10-phenanthroline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	25°C	?	U		B3=21.1	1952BGa (96863)	1107

C18H12N4O4S		HL					(7221)		
8-Hydroxy-7-(8-quinolyl)azo-5-quinolinesulfonic acid; C9H6N.N:N.C9H4(OH)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	NaCl	25°C	0.10M	U		K1=11.88 B2=33.78	1990NOa (96872)	1108

C18H12N6		L					CAS 3682-35-7	(1891)	
2,4,6-Tris(2-pyridyl)-1,3,5-triazine; C3N3(C5H4N)3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	23°C	0.50M	U	M	B2=11.05	1984SWa (96879)	1109

Fe++	sp	oth/un	20°C	dil	U		B2=11.45 K(FeL2+H)=2.40	1972FEc (96880)	1110

Fe++	oth	oth/un	?	0.50M	U	I	K1=5.04 B2=11.86 K(FeL2+H)=2.56	1971LPa (96881)	1111
I=2.0: K1=5.72, B2=12.53, K(FeL2+H)=2.76; I=5.0: K(FeL2+H)=3.10									

Fe++	sp	NaCl	25°C	0.10M	U		B2=12.4	1968PMb (96882)	1112
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Fe++      sp  oth/un 25°C 0.06M U      B2=10.24      1966BCb (96883)1113
*****
C18H15N3O3S      HL      CAS 69423-73-0 (4137)
Di-2-tolylthiovioluric acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      sp  mixed  ?  33% U      B2=5.60      1960SBa (97002)1114
Medium: 33% acetone, 0.2 M KNO3
*****
C18H15N3O3S      HL      CAS 69423-74-1 (4138)
Di-3-tolylthiovioluric acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      sp  mixed  ?  33% U      B2=6.08      1960SBa (97004)1115
Medium: 33% acetone, 0.2 M
*****
C18H15N3O3S      HL      CAS 61625-17-0 (4139)
Di-4-tolylthiovioluric acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      gl  diox/w 30°C 25% M T H      K1=4.81  B2= 8.75  1978MGe (97012)1116
Medium: 25% dioxane/H2O, 0.10 M NaClO4. Data for 40, 45 and 50 C. DH(K1)=
-39.6 kJ mol-1, DS(K1)=-38.9 J K-1 mol-1; DH(K2)=-51.8, DS(K2)=-92.5.
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-----
Fe++      sp  mixed  ?  33% U      B2=5.80      1960SBa (97013)1117
Medium: 33% acetone, 0.2 M KNO3
*****
C18H18N4      L      CAS 16858-01-8 (1528)
Tris(2-pyridylmethyl)amine; (C5H4NCH2)3N
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      gl  KNO3  20°C 0.10M C  H      K1=8.65      1977AHc (97259)1118
K(FeL(OH)+H)=8.78
DH1=-32.7 kJ mol-1, DS1=54.0
-----

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-----
Fe++      gl  KNO3  20°C 0.10M U  H      K1=8.7      1970WAa (97260)1119
By calorimetry, DH=-32.6 kJ mol-1, DS=53.9 J K-1 mol-1
*****
C18H20N2O6      H4L      CAS 10328-28-6 (3501)
Ethylenedinitrilo-N,N'-bis(2'-hydroxyphenyl)-N,N'-diethanoic acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe++      vlt NaClO4 25°C 0.10M U      K1=14.26      1964SCa (97394)1120
*****

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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
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Fe++      g1  oth/un 25°C 0.10M U      K1=12.4      1965LCa (97540)1121
*****
```

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)
Triethylenetetraaminehexaethanoic acid;((H00C.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

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

Fe++	EMF NaCl04 25°C 0.10M U	K1=17.1	B2=27.3	1965SCb (98029)1122
		K(FeL+H)=8.67		
		K(FeHL+H)=3.25		
		K(FeH2L+H) < 2		
		K(FeL+OH)=4.98		

$$K(\text{FeLOH}+\text{OH})=4.19, K(\text{Fe}_2\text{L}+\text{OH})=5.27, K(\text{Fe}_2\text{LOH}+\text{OH})=5.18$$

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

Fe++ gl KNO3 25°C 0.10M C K1=13.09 1992CDd (98201)1123
B(Fe2L)=15.55
B(FeH-1L)=4.16

C19H12N5Cl L (7176)
4-Chloro-2,6-bis(benzimidazol-2-yl)-pyridine; ClC5H2N(C7H5N2)2

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

Fe++	EMF	a1c/w	20°C	70%	C	1995ELa (98994)1124
						K(FeL2+H)=17.4
						K(FeHL2+H)=10.08
						K(FeH2L2+H)=6.66
						K(FeH3L2+H)=4.61

Medium: 70% v/v EtOH

C19H13N3O4S H2L CAS 85413-91-9 (4144)
1-Hydroxy-2-(8'-quinolylazo)naphthalene-4-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe++ gl alc/w 25°C 50% U K2=9.4 1967AND (99029)1125

Medium: 50% MeOH, 0.1 M NaClO₄

C19H13N5 L (6734)

2,6-Bis(benzimidazol-2-yl)pyridine:

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	mixed	20°C	50%	C T H		K1=6.00 B2=11.26	2002ELa (99059)	1126
Medium: 50% v/v propylenecarbonate/MeOH. Data for 4-32 C. At 4 C, K1=5.90, K2=5.05 K3=4.0. DH(B2)=50.52 kJ mol ⁻¹ , DS(B2)=43.28 J K ⁻¹ mol ⁻¹ .									
Fe++	sp	non-aq	20°C	100%	C I		K1=5.90 B2=10.70	1996ELa (99060)	1127
Medium: MeOH. Also data for the 4-hydroxy- and 4-chloro-2,6-bis(imidazol-2'-yl)pyridine ligands.									
Fe++	sp	non-aq	25°C	100%	U H		K1=5.46 B2=10.11 B3=13.60	1993SGa (99061)	1128
Medium: MeOH. Data also from magnetic measurements									
Fe++	sp	alc/w	20°C	100%	U		K1=5.54 B2=9.66 B3=13.51	1992SLa (99062)	1129
Medium: MeOH; also effect of added CHCl ₃ studied									

C19H19N7O6		H3L			Folic acid		CAS 75708-92-8	(194)	
Pteroylglutamic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U		B2=7.9	1953ALa (99286)	1130

C19H31N3O4		H2L					(6692)		
N,N'-(Pyridine-2,6-diyl)bis-methylene)bis-N-methylvaline;									
C5H3N(CH2.N(CH3)CH(CH3)2)COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	NaNO3	25°C	0.10M	U		K1=10.05	1992BSb (99450)	1131

C20H14N2O		HL					(5291)		
1-(1-Naphthylazo)-2-hydroxynaphthalene;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	mixed	25°C	75%	U		K1=7.54	1972MCb (99599)	1132
Medium: 75% acetone, 0.1 M KNO3									

C20H14N2O		HL					CAS 2653-64-7	(5292)	
1-(2-Naphthylazo)-2-hydroxynaphthalene;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	mixed	25°C	75%	U		K1=7.80	1972MCb (99614)	1133
Medium: 75% acetone, 0.1 M KNO3									

C20H14N4 L CAS 63283-05-6 (4146)
2,2':6',2'':6'',2'''-Quaterpyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	sp	oth/un	25°C	0.01M	U	H		K1=8.28 B2=14.93	1964B0a (99740)	1134

Medium:H2SO4. DH(K1)=-31.4 kJ mol⁻¹, DS=50 K J-1 mol⁻¹; DH(K2)=-56.4, DS=-63

C20H14N4O6S2 H2L FerroZine CAS 28048-33-1 (2785)
3-(2-Pyridyl)-5,6-diphenyl-1,2,4-triazine-4,4'-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	sp	none	25°C	0.0	U			B3=15.56	1976GIa (99742)	1135

C20H24N2O12S2 H6L CAS 3625-85-3 (5755)
N,N'-Bis(2-hydroxy-5-sulfobenzyl)-diaminoethane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C			K1=19.75 K(FeL+H)=6.25 K(FeHL+H)=4.73	1988CMb (100026)	1136

C21H13N3O HL (6256)
1-(2'-Quinolylazo)-acenaphthylen-2-ol; C9H6N.N:N.C12H6.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	diox/w	30°C	75%	U	IH		K1=8.20 B2=14.92	1979SGd (101013)	1137

C21H24N4 L (931)
Tris((6-methyl-2-pyridyl)methyl)-amine; (CH3.C5H3N.CH2)3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KNO3	20°C	0.10M	C			K1=4.46	1977AHc (101245)	1138

C21H30O2 HL Delta-THC CAS 5957-75-5 (1206)
D'-6a,10a-Tetrahydrocannabinol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	non-aq	30°C	100%	U			B2=21.781 B(FeHL)=7.785 B(FeHL2)=10.436	1976WPa (101383)	1139

Medium: t-BuOH, 0.15 M Bu4NNO3

C22H15N3O HL (6255)

1-(4'-Methyl-2'-quinolylazo)-acenaphthylen-2-ol; CH3.C9H5N.N:N.C12H6.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	diox/w	30°C	75%	U	IH		K1=8.85	1979SGd (101521)	1140

C22H23N2O8Cl		H2L		Aureomycin				CAS 56235-18-8	(3515)	
Chlorotetracycline;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U			K1=5.7 B2=10.40	1956ARd (101759)	1141

C22H24N2O8		H2L		Tetracycline				CAS 60-54-8	(2201)	
Tetracycline;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	NaCl04	25°C	0.10M	C				1996SJa (101813)	1142
B(FeHL)=5.80										
B(FeH2L)=11.49										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	0.01M	U			K1=5.3 B2=9.30	1956ARd (101814)	1143

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	oth/un	20°C	.005M	U			K1=5.6 B2=10.40	1956ARd (101882)	1144

C22H28N4O8		H2L						CAS 388603-36-9	(8004)	
4,10-Bis(2-hydroxy-5-nitrobenzyl)-4,10-diaza-1,7-dioxadodecane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	R4N.X	25°C	0.10M	C			K1=13.7	2001CCb (102022)	1145
B(FeH2L)=25.6										
B(FeHL)=19.4										

Medium: 0.10 M Me4NCl.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
C22H34N6O2		L		BISBAMP				(5868)		
3,9,17,23,29,30-Hexaaza-6,20-dioxatricyclo[23.3.1.1]triaconta-1(20),11,13,15(30),25,27-hexaene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.10M	U	M		K1=6.64	1993MUa (102241)	1146
K(FeL+H)=7.64										
B(FeH-1L)=1.55										

K(FeHL+S04)=2.8

C24H16N2 L Bathophenan CAS 1662-01-7 (2749)
4,7-Diphenyl-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	alc/w	25°C	100%	U		K1=6.1 B3=22.7	1972L Ba (102857)	1147

Fe++	oth	mixed	25°C	30%	U		B3=21.7	1970L Pa (102858)	1148
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Method: platinum electrode. Medium: <0.05,30% CH3CN.

Fe++	sp	alc/w	18°C	10%	U		K2=21.8	1960N Sa (102859)	1149
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Medium: EtOH

C24H34N4O12 H6L (5480)
1,4-Bis(2,5,5-tris(carboxymethyl)-2,5-diazapentyl)benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KNO3	25°C	0.10M	C		K1=13.54 K(FeL+H)=9.81 K(FeHL+H)=5.28 K(FeH2L+H)=2.99 K(FeH3L+H)=2.23	1983N Ma (103225)	1150

C24H34N6O6 H2L CAS 247158-53-8 (7573)
1,7-Bis(2-hydroxy-5-nitrobenzyl)-4,10-dimethyl-1,4,7,10-tetraazadodecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	R4N.X	25°C	0.10M	C		K1=13.4 B(FeH2L)=26.9 B(FeHL)=20.3	2001C Cb (103229)	1151

Medium: 0.10 M Me4NCl.

C24H54N8O3 L O-BisTren CAS 64819-97-2 (5473)
7,19,30-Trioxa-1,4,10,13,16,22,27,33-octaazabicyclo[11.11.11]pentatriacontane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.10M	U	M	B(Fe2H-1L)=3.62 B(FeH2L)=23.22 K(FeH2L+S04)=1.6 K(Fe2H-1L+S04)=2.64	1993M Ua (103573)	1152

C24H60N12 L CAS 24904-24-3 (5837)

1,4,7,10,13,16,19,22,25,28,31,34-Dodecaazacyclohexatriacontane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe++	gl	NaClO4	25°C	0.15M	C	M		1992BBa (103587)	1153
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K(Fe(CN)6+H5L)=4.57

K(Fe(CN)6+H6L)=5.16

K(Fe(CN)6+H7L)=5.96

K(Fe(CN)6+H8L)=6.96

K(Fe(CN)6+H9L)=7.53

C25H22N6O2 L CAS 160488-19-7 (7710)

N,N'-1,3-Propanediylbis-(2,2-bipyridyl-5-carboxamide);

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

Fe++	sp	non-aq	25°C	100%	C		B2=12.1	2000FBa (103616)	1154
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B(Fe2L2)=18.6

B(Fe2L3)=25.50

Medium: methanol, 0.10 M Bu4N[CF3SO3].

C25H28N4O10 L CAS 752-13-6 (2940)

Tetraacetylriboflavine;

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

Fe++	nmr	non-aq	38°C	100%	U		K1=2.0	1975LHa (103676)	1155
------	-----	--------	------	------	---	--	--------	------------------	------

B3=5.83

In acetone. B3 measured by ESR at 38 C, K1 by spectrophotometry at 25 C

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

Fe++	gl	NaNO3	20°C	0.1M	U			1963AEa (103803)	1156
------	----	-------	------	------	---	--	--	------------------	------

K(Fe+H2L)=7.2

K(Fe+H3L)=3.8

C26H24P2 L CAS 28240-60-0 (2280)

Ethylenebis(diphenylphosphine); (C6H5)2P.CH2.CH2.P(C6H5)2

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

Fe++	sp	non-aq	25°C	100%	U	I	K1=4.07 B2=7.10	1995MFa (103929)	1157
------	----	--------	------	------	---	---	-----------------	------------------	------

In MeCN(60%(v/v))-toluene mixtures. I=0.05 M Et4NBF4

In 30%: B1=4.01; 40%: 4.08; 50%: 4.25

C26H28N6 L CAS 16858-02-9 (933)

N,N,N',N'-Tetrakis-(2-pyridylmethyl)-diaminoethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	KNO3	20°C	0.10M	C	H	K1=14.61	1977AHc (104002)	1158
Calorimetry: DH1=-75.5 kJ mol ⁻¹ , DS1=22.2									
Fe++	cal	KNO3	20°C	0.10M	U	H	K1=14.6	1970WAa (104003)	1159
DH=-69.8 kJ mol ⁻¹ , DS=41.4 J K ⁻¹ mol ⁻¹									

C27H30N4O9		H6L		Trencam			(5754)		
2,2',2''-Tri(2,3-dihydroxybenzamidoethyl)amine; N(C2H4.NH.CO.C6H3(OH)2)3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	KNO3	25°C	0.10M	C		K1=12.6 K(FeL+H)=11.2	1987RLa (104473)	1160

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
Fe++	sp	non-aq	25°C	100M	C		K1eff=-1.99	2001ADb (104506)	1161
Medium: MeOH, 0.2 M acetate buffer, pH 5.95. K1eff: Al+HnL=All									

C28H22N2O8S2		H2L					CAS 4403-90-1 (2911)		
1,4-Di(4-methylanilino)anthraquinone; (Alizarin cyanin green)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	sp	oth/un	25°C	?	U		K1=5.34 B2=9.3	1978ISb (104663)	1162

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
Fe++	vlt	R4N.X	22°C	0.40M	U		K(Fe+H6L=FeL+6H)=-39.5 K(FeL+H)=10.4 K(FeHL+H)=7.7 K(FeH2L+H)=7	1985LEb (105190)	1163

C30H48N8O6		H2L					CAS 210773-11-8 (7576)		
1,13-Bis(2-hydroxy-5-nitrobenzyl)-4,7,10,16-tetramethyl-1,4,7,10,13,16-hexaazaoctadecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

Fe++ gl R4N.X 25°C 0.10M C K1=10.0 2001CCb (105335)1164
 B(FeH3L)=31.4
 B(FeH2L)=25.1
 B(FeHL)=17.7
 B(FeH-1L)=0.5

Medium: 0.10 M Me4NCl.

C30H50N6O2 L CAS 380446-61-7 (8002)
 3,7,11,19,23,27-Hexaaza-33,34-dihydroxy-15,31-dimethyltriclotetratriciaconta-1,13,15,17,29,30-hex

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.10M	U		K1=12.51 K(FeL+H)=10.16 K(FeHL+H)=7.93 K(FeH2L+H)=5.34 K(FeL+Fe)=8.39	2001WMa (105369)	1165

K(Fe2L+H)=4.31, *K(Fe2L)=-10.23, *K(Fe2(OH)L)=-11.34, *K(Fe2(OH)2L)=-12.93

C32H38N6O2 H2L CAS 185675-92-7 (7485)
 15,31-Dimethyl-3,11,19,27,33,35-hexaazapentacyclohexatriacontadodeca-34,36-diol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	gl	KCl	25°C	0.10M	C		K1=15.32 B(FeHL)=26.0 B(FeH2L)=35.24 B(FeH3L)=40.10 B(Fe2L)=25.20	1999WMa (105694)	1166

B(Fe2HL)=31.22; B(Fe2H-1L)=15.29.

C33H36N4O6 L Bilirubin CAS 635-65-4 (2623)
 Bilirubin

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	vlt	oth/un	23°C	0.05M	U		Keff=7.54	1974NHa (105897)	1167

Medium: 0.05 M phosphate buffer, pH 8

C34H54O8 H2L Lasalocid CAS 25999-20-6 (2335)
 Lasalocid acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe++	cal	alc/w	25°C	100%	U T H			1990PJa (106132)	1168

Medium: MeOH. DG(K1)=-28.6 kJ mol⁻¹, DH=-6.6; DG(B2)=-51.5, DH=-27

Fe++	gl	alc/w	25°C	100%	M		K1=5.0 B2=9.0	1988LTa (106133)	1169
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$$*K(\text{FeP}(\text{H}_2\text{O})) = 1.9$$

In micellar dodecyl sulfate solution (5%), 0.1 M Me4NBr.

Cyclo(Gly-eLL-Gly)₂ (eLL=N,N'-ethylene-bridged (S)-leucyl-(S)-leucine

[illegible]

Medium: MeCN

alpha-Cyclodextrin, Cyclohexaamylose;

[illegible]
$$K(\text{Fe}(\text{Cp})_2\text{I}) = 2.14$$
$$K(\text{Fe}(\text{Cp})_2\text{L}+\text{L})=3.37$$
$$K(\text{FeA5B+I}=\text{FeA5B})=1.18$$

A=CN, B=1,8-Bis(pyrazinium)octane. For B=1,9-Bis(pyrazinium)nonane, K=1.98;

Hexakis(2-amino)-alpha-cyclodextrin;

$$K(\text{Fe}(\text{CN})_6)] = 5.49$$

Medium: 0.1 M aminoacetonitrile buffer, pH 5.3. Method: cyclic voltammetry

3,3'-Bis(N,N-di(carboxymethyl)aminomethyl)thymolsulfonephthalein;

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500 8000 8500 9000 9500 10000

Extrapolated from data for I=0.1-1.0 M KNO₃. Data for 40 C.

DH(K₁)=-23 kJ mol⁻¹, DS(K₁)=128 J K⁻¹ mol⁻¹.

C42H42NP₃ L (7145)

tris(2-Diphenylphosphinoethyl)amine

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

Fe++ sp non-aq 25°C 100% U K₁=5.37 1995MFa (106941)1176

In MeCN(60%(v/v))-toluene mixtures. I=0.05 M Et₄NBF₄

C42H42P₄ L (6540)

Tris(2-(diphenylphosphino)ethyl)phosphane; P(CH₂CH₂P(C₆H₅)₂)₃

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

Fe++ sp non-aq 25°C 100% U K₁=6.00 1995MFa (106943)1177

In MeCN(60%(v/v))-toluene mixtures. I=0.05 M Et₄NBF₄

C42H70O₃₅ L b-Cyclodextrin CAS 7585-39-9 (7611)

Cycloheptaamylose;

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

Fe++ sol none 25°C C 1998WTa (106990)1178

K(Fe(Cp)₂+L)=4.22

Fe(Cp)₂ is ferrocene.

C44H30N₄ H₂L Tetraphenylpor. CAS 917-23-7 (1781)

5,10,15,20-Tetraphenyl-21H,23H-porphine;

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

Fe++ vlt non-aq 25°C 100% U M 1996NSa (107061)1179

K(FeL+2py=FeL(py)₂)=5.7

K(FeL+2A=FeLA₂)=5.6

K(FeL+2C=FeLC₂)=5.6

K(FeL+2D=FeLD₂)=6.7

Method: cyclic voltammetry. Medium: DMF. A=4-Cyanopyridine,

C=3,4-Dimethylpyridine, D=N-Methylimidazole. Also data for other porphyrins.

Fe++ kin non-aq 25°C 100% U K₁=8.0 1985FTa (107062)1180

Medium: pyridine : In 3,5-dichloro-py: K₁=6.0, in 3-cyano-py: K₁=6.2

C48H80O₄₀ L g-Cyclodextrin CAS 17465-86-0 (7612)

Cyclooctaamylose;

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

Fe++ sol oth/un 25°C U 1998WTa (107428)1181

$$K(\text{Fe}(\text{Cp})_2 + \text{L}) = 2.96$$

Fe(Cp)₂ is ferrocene.

C52H46N4O12S4 H4L (6861)
5,10,15,20-Tetrakis(2,6-dimethyl-3-sulfonatophenyl)porphin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	vlt	NaNO3	?	0.20M	C				1991KZa (107476)	1182

$$*K(\text{FeL}) = -9.7$$

Polymer DNA (4185)
Deoxyribonucleic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	sp	NaCl	25°C	0.02M	C	M			2003Mwa (108146)	1183

$$\text{Keff}(\text{Fe}(\text{phen})_3 + \text{L}) = 3.155$$

$$\text{Keff}(\text{Fe}(\text{phen})_2\text{A} + \text{L}) = 4.782$$

$$\text{Keff}(\text{Fe}(\text{phen})\text{A}_2 + \text{L}) = 4.612$$

L is calf thymus DNA. Medium: 5mM Tris (pH 7.2), 0.02 M NaCl.

A is 4,7-diphenyl-1,10-phenanthroline. Data for 0.005-0.12 M NaCl.

Fe++	vlt	NaCl	25°C	0.01M	C	M			2000AIa (108147)	1184
									$K(\text{Fe}(\text{bipy})_3 + \text{L}) = 3.34$	
									$K(\text{Fe}(\text{phen})_3 + \text{L}) = 4.46$	

Method: differential pulse voltammetry.

Medium: 0.01 M NaCl, 0.01 M Tris, pH 7.

Fe++	vlt	oth/un	RT	0.01M	U				1996PAa (108148)	1185
									$K_{\text{leff}} = 3.81$	

Medium: 0.01 M tris buffer, pH 7. Metal is ferrocenyl nucleobase complex.

Host-guest interaction.

Polymer (5381)
Methaemoglobin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	oth	oth/un	26°C	?	U	M			1968GGa (108259)	1186

$$K(\text{MeHb} + \text{A}) = 5.2$$

Method: Scatchard plot, MeHb=methaemoglobin, A=CN

Polymer RNA (4205)
Ribonucleic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe++	vlt	oth/un	RT	0.01M	U				1996PAa (108415)	1187

$$K_{\text{leff}} = 4.08$$

Medium: 0.01 M tris buffer, pH 7. Fe is ferrocenylnucleobase complex.

Host-guest interaction.

e- HL Electron (442)
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	oth	none	50°C	0.00	U T			1972LEc K=-9.23(-74mV,50 C)	(484)	1188
K: Fe3O4(s)+8H + 8e=3Fe(s)+4H2O. K=-4.67(-49mV,150 C), -4.32(-56 mV,250 C), -6.41(-99mV,350 C). Method: combination of thermodynamic data										
Fe+++	oth	none	50°C	0.00	U T			1972LEc K=-35.6(-1.14V,50 C)	(485)	1189
K: Fe2O3(s)+H2O+2e=2HFeO2-. K=-29.1(-1.22V,150 C), -27.0(-1.4V,250 C), -25.9 (-1.6V,350 C). Method: combination of thermodynamic data										
Fe+++	oth	none	50°C	0.00	U T			1972LEc K(Fe3++e-=Fe2+)=12.80(821mV)	(486)	1190
K=11.91(1.00V,150 C), 11.08(1.15V,250 C), 10.27(1.27V,350 C) Method: combination of thermodynamic data										
Fe+++	EMF	NaClO4	25°C	0.10M	U T			1972WLa K=13.013(769.8mV,25 C)	(487)	1191
K: Fe(III) + e. K=13.514(745.8mV,5 C), 13.389(752.2mV, 10 C), 13.263(758.3mV ,15 C), 13.138(764.2mV,20 C), 12.888(775.2mV,30 C), 12.762(780.3mV,35 C)										
Fe+++	oth	none	25°C	0.0	M H			1968LCd DH(Fe + e = Fe++) = -41.8 kJ mol-1	(488)	1192
Fe+++	EMF	none	25°C	0.0	U			1968MRd K(Fe(CN)6+e)=6.103 (361.0 mV)	(489)	1193
Fe+++	EMF	none	25°C	0.0	U T H			1967HIa K(Fe(CN)6+e)=6.00, 355 mV	(490)	1194
DH=-111.6 kJ mol-1, DS=-259 J K-1 mol-1, 15-30 C										
Fe+++	EMF	oth/un	25°C	var	U			1966MOa K(Fe(CN)5H2O+e)=6.96 (412 mV)	(491)	1195
Fe+++	EMF	none	25°C	0.0	U			1966ROa K(Fe(CN)6+e)=6.160, 364.4 mV	(492)	1196
Fe+++	EMF	none	25°C	0.0	U			1965LBa K(Fe(CN)6+e)=6.160 (364.4 mV)	(493)	1197
Fe+++	EMF	oth/un	90°C	4.0M	U			1963SSe K=-10.13(-730 mV)	(494)	1198

Medium: KOH. K: Fe(OH)4+e=Fe(II)(OH)4

Fe+++ EMF NaClO4 25°C 2.0M U 1962ZSa (495)1199
K(Fe+e=Fe(II))=12.47(737.5 mV)

Fe+++ cal none 25°C 0.0 U H 1958FOa (496)1200
Medium: HClO4, I=0 corr. DH(Fe+e=Fe(II))=-39.9 kJ mol⁻¹

Fe+++ EMF none 25°C 0.0 M 1958LAa (497)1201
K'=15.35 (908 mV)
K': $\text{FeOOH(s)} + 3\text{H} + \text{e} = \text{Fe} + 2\text{H}_2\text{O}$. Alternative value: K'=15.87, 939 mV

Fe+++ EMF KNO₃ 25°C 0.25M U I 1958SPa (498)1202
K(Fe+e=Fe(II))=12.66(749 mV)
Medium:HNO₃. In I=1 M: K=12.61(746 mV)), I=4 M: K=12.88(762 mV). In 1 M HCl:
K=12.37(732 mV), 1 M HClO₄: K=12.97(767 mV), 0.5 M H₂SO₄: K=11.39(674 mV)

Fe+++ oth none 25°C 0.0 U 1957W0a (499)1203
K=36(710 mV)
K: Fe(VI)O4+3H2O+3e=FeOOH(s)+5OH. From thermodynamic data

Fe+++ EMF NaClO₄ 25°C 0.10M U I 1937SSa (500)1204
K(Fe+e=Fe(II))=12.67(749 mV)
Medium: HClO₄. At I=0.5 to 1 M: K=12.53(741 mV). At I=0: K=13.07(770.1 mV)

Fe+++ EMF none 25°C 0.0 U 1935KTa (501)1205
K: Fe(CN)₆+e=Fe(II)(CN)₆ K=6.02(356.0 mV)

Fe+++	EMF	KCl	21°C	1.0M	U	1928DAa	(502)1206
						K(Fe(CN)6+e)=8.24(198+283	mV)
						K(Fe(CN)5(NH3)+e)=6.43	
						K(Fe(CN)5(NO2)+e)=8.86	
						K(Fe(CN)5(H2O)+e)=8.43	

Fe+++ EMF oth/un 80°C 40% U 1920GGa (503)1207
K=23.6(0.55 V)
Medium:40 % NaOH. K: Fe(VI)O₄+3e=Fe(III)

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	oth	none	25°C	0.0	M				1997SAb	(1143)1208
Ks(Fe(AsO4)(s)+H=Fe+HAsO4)=-9.45. Calculated from thermodynamic data.										

Fe+++ oth oth/un 25°C 0.0 U 1990SAa (1144)1209
 *K(FeL(s)+H=Fe+HL)=-10.20

Calculated from thermodynamic data.

Fe+++ gl NaNO3 25°C 3.00M C 1988KRb (1145)1210

B(1,-2,1)=0.11
B(1,-3,1)=-1.34

B(p,q,r): pM+qH+rH3L=MpHq(H3L)r.

Fe+++ sol oth/un 20°C var U 1956CHc (1146)1211

Kso(FeL)=-20.24

B04H4- HL Borate CAS 10043-35-3 (991)
Borate; B(OH)4-

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

Fe+++ gl NaNO3 25°C 0.10M C 2002MDa (1307)1212

K(Fe+B(OH)4=Fe(H2BO4)+2H)=3.67

K(Fe+B(OH)4=Fe(OH)(H2BO4)+3H)=1.16, K(Fe+B(OH)4=Fe(OH)2(H2BO4)+2H)=-1.72

Fe+++ gl NaClO4 25°C 0.70M C I 1997BTb (1308)1213

K(Fe+B(OH)3=FeB(OH)4+H)=-2.27

Additional method: Pt/Fe electrode. At I=0.0, K(Fe+B(OH)4=FeB(OH)4)=7.53,
K(Fe+B(OH)3=FeB(OH)4+H)=-1.71,

Fe+++ sp oth/un 25°C 0.68M U K1=1.0 B2=2.0 1980EKa (1309)1214
Method: UV spectroscopy

Fe+++ oth oth/un ? var U K1=8.5 B2=15.6 1964BUB (1310)1215
B3=20.3

Fe+++ sp oth/un ? ? U K1=8.58 B2=15.54 1961SHd (1311)1216

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

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

Fe+++ sp NaClO4 20°C 0.40M U K1=-0.09 1988FWa (1927)1217

Fe+++ gl oth/un 25°C 0.53M U T K1=1.15 1977NIa (1928)1218

Fe+++ dis NaClO4 25°C 4.0M U K1=-0.10 B2=0.00 1972STb (1929)1219

Fe+++ sp NaClO4 20°C 3.0M U T H K1=0.33 B2=-0.06 1971TSi (1930)1220
At I=0 corr: 10 C: K1=0.53,K2=-0.10; 20 C: K1=0.68,K2=-0.01; 30 C: K1=0.88,
K2=0.05; 40 C: K1=1.06,K2=0.14. DH(K1)=25.5 kJ mol-1, DH(K2)=11.3

Fe+++ sp none 25°C 0.0 U H K1=0.72 1970KVa (1931)1221
DH(K1)=27.2 kJ mol-1

Fe+++ kin NaClO4 2°C 1.0M U 1969CEa (1932)1222
K1in=-1.47

K1out=-0.70

Medium: LiClO₄. 1.6 C. Spectrophotometry also used

Fe+++ dis NaClO₄ 25°C 1.0M U K1=-0.12 B2=-0.38 1969MWb (1933)1223

Fe+++ sp NaClO₄ 20°C 1.20M U K1=-0.15 1967MAh (1934)1224

Fe+++ sp KNO₃ 20°C 0.47M U I K1=0.36 1957YTa (1935)1225
K1=0.27 (I=2.7), 0.22 (I= 1.2 to 2.3). Also for Mg(NO₃)₂ and Al(NO₃)₃ media

Fe+++ sp NaClO₄ 25°C 1.20M U K1=-0.21 B2=-0.70 1955LRa (1936)1226

Fe+++ sp NaClO₄ 27°C 1.0M U H K1=-0.30 1942RSa (1937)1227

Medium: Na/HClO₄. At I=0 corr. K1=0.60, DH(K1)=26 kJ mol⁻¹, DS=96 J K⁻¹ m⁻¹

Fe+++ EMF none 20°C 0.0 U K1=0.49 1939LIa (1938)1228

BrO₃- HL Bromate (6017)
Bromate;

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

Fe+++ dis NaClO₄ 25°C 1.0M U T H K1=0.36 B2=0.01 1971MHb (2412)1229

Medium: HClO₄. DH(K1)=15.9 kJ mol⁻¹, DS=59 J K⁻¹ m⁻¹, DH(K2)=18.8, DS=56

K1=0.26(15 C); K1=0.30, K2=-0.52(20 C); K1=0.44, K2=-0.35(30 C)

CN- HL Cyanide CAS 74-90-8 (230)

Cyanide;

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

Fe+++ sp KCl 25°C 0.10M C T H 2002PCb (2675)1230

K(FeA+CN)=6.55

Data for 10-35 C. DH(FeA+CN)=-75 kJ mol⁻¹, DS=-123 J K⁻¹ mol⁻¹.

A is N-acetyl-microperoxidase

Fe+++ vlt none ? 0.0 U M 1991CHd (2676)1231

K(Fe(CN)₆+Me₄N)=0.76; K(Fe(CN)₆+2Me₄N)=1.7; K(Fe(CN)₆+3(Me₄N)=3.3.

Method: Cyclic Voltammetry

Fe+++ sp NaNO₃ 25°C 0.10M U M 1982WPa (2677)1232

K(2FeA+4L=2FeAL₂)=5.66

A=Tetrakis(4-N-methylpyridyl)porphyrin

Fe+++ nmr non-aq 20°C 100% U M 1978WYa (2678)1233

K(FeA+L)=4.28

K(FeAL+L)=3.04

Medium: DMSO-d₆. A=Protoporphyrin-IX-chloride

Fe+++ nmr non-aq 20°C 100% U K1=4.28 B2=7.32 1975WYa (2679)1234

Medium: DMSO

Fe+++ sp NaCl04 25°C var U 1973MHa (2680)1235
K(Fe+Mo(CN)8)=2.6

Fe+++ sp NaCl04 25°C 1.0M U 1972EWa (2681)1236
K(Fe(CN)5OH+H)=8.4

Fe+++ sp oth/un 0°C var U 1970EJb (2682)1237
K(Fe2(CN)10+Fe2L10=2Fe2L10)=5

Fe+++ cal oth/un 25°C 0.0 U H 1965WCa (2683)1238
B6=43.6
DH(B6)=-293.2 kJ mol-1. By thermodynamic calculations B6 also 43.9

Fe+++ cal oth/un 25°C var U H 1964GHc (2684)1239
DH(B6)=-284.2 kJ mol-1

Fe+++ cal oth/un 25°C ? U H 1961GUa (2685)1240
DB(B6)=-297.1 kJ mol-1

Fe+++ sp oth/un 20°C var U M 1961MAi (2686)1241
K(Fe+Mo(IV)L8)=4.14

Fe+++ oth none 25°C 0.0 U 1956SMa (2687)1242
B6=31

Method: combination of thermodynamic data

Fe+++ cal oth/un ??? ? U H 1951YAA (2688)1243
DH(B6)=-223.4 kJ mol-1

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

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

Fe+++ sol NaCl04 25°C 0.20M C M B2=7.40 1992BSa (3227)1244
K(Fe+H2O+L=Fe(OH)L+H)=-3.83

Solubility study of hematite (Fe2O3) suspensions. Constants at I=0

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

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

Fe+++ sp NaCl04 25°C 0.30M U I K1=2.21 1982MSf (3490)1245
Kout(Fe(H2O)x+L)=1.74

Fe+++ sp oth/un 30°C U 1974EFa (3491)1246
K(Fe(CN)5(H2O)+L)=1.4

C6N6Fe---- H4L (2191)

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

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

Fe+++ sol oth/un 25°C var U 1956TGb (3567)1247
Kso(Fe4L3)=-40.52

C6N6Fe--- H3L Ferricyanide (2491)

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

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

Fe+++ sp oth/un 25°C 0.30M U I K1=1.91 1982MSf (3646)1248
Kout(Fe(H2O)x+L)=1.52

Fe+++ sp oth/un 30°C U 1974EFa (3647)1249
K(Fe(CN)5(H2O)+L)=1.2

Fe+++ kin NaClO4 25°C 0.50M U T K1=0.5 1967SSf (3648)1250
K1out=1.54

Medium: HClO4. Spectrophotometry also used. K1out=0.79(9 C)

Fe+++ sp NaClO4 26°C 1.0M U I K1=1.32 1951IDa (3649)1251
Medium: NaClO4, 0.1 M HClO4. In 1 M NaNO3, 0.1 M HNO3 K1=1.18. 0.5 M HClO4:
K1=1.56

C8N8Mo---- H4L (5471)

Octacyanomolybdate; [Mo(CN)8]----

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

Fe+++ sp NaClO4 25°C 0.30M U K2=5.15 1982MSf (3700)1252
Kout(Fe(H2O)x+L)=2.41

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

Chloride;

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

Fe+++ sp NaClO4 25°C 0.10M C I K1=0.67 B2= 1.37 2005BYa (4838)1253
Data for I=0.1-8.5 m NaClO4 and for 0.1-8.2 m HClO4. At I=0.7 m NaClO4,
K1=0.43, B2=-0.41. At I=5.0 m, K1=0.70, B2=-0.28

Fe+++ kin NaClO4 25°C 2.0M U 2001BCc (4839)1254
K(FeA2+Cl)=-1.69

Medium: 2.0 M NaClO4/NaX/HClO4. HA=N-methylacetohydroxamic acid.

Fe+++ sp NaCl 25°C 0.0 C T H K1=-0.366 B2=-1.74 2001ZPa (4840)1255

Calc. from data (10-100 C) for 0.2-5.8 m NaCl, using Pitzer and Helgeson act. coeffs. DH(K1)=24.7 kJ mol⁻¹, DS=75.0; DH(K2)=9.9, DS=6.1; DH(B4)=71.4

Fe+++ oth oth/un 25°C 1.0M C K1=0.58 1999IFa (4841)1256
Method: EXAFS. Medium: 1.0 M HClO₄.

Fe+++ kin KNO₃ 25°C 0.10M C K1=1.53 1997EHa (4842)1257

Fe+++ oth none 25°C 0.0 C I K1=1.28 B2= 1.16 1995MYa (4843)1258
By extrapolation of literature data using Pitzer equations.
At I=0.72 M, K1=0.57, B2=0.13.

Fe+++ sp NaClO₄ 20°C 0.40M U K1=0.49 1988FWa (4844)1259

Fe+++ sp none 25°C 0.0 U IH 1986BLb (4845)1260
K3=-0.82
K4=-2.11

Fe+++ sp oth/un 25°C 2.74M U K1=0.73 B2=0.26 1981BKe (4846)1261
Medium: mixed HCl-HClO₄ solutions.

Fe+++ sp NaClO₄ 25°C 2.60M U H K1=0.81 B2=1.06 1979SPa (4847)1262
DH(K1)=13.39 kJ mol⁻¹. DH(B2)=22.18 kJ mol⁻¹

Fe+++ sp oth/un 25°C 1.0M C K1=0.47 1978PTa (4848)1263
Kout(Fe+Cl)=0.15
Medium: 1.0 M Fe(ClO₄)₃/HClO₄, pH 0.30

Fe+++ EMF oth/un 90°C 0.00 U TI K1=1.38 1977NTa (4849)1264

Fe+++ ix alc/w 20°C 60% U K1=1.39 1976BFb (4850)1265
Medium: 60%(vol) MeOH; for 60% EtOH K1=1.47, 60% PrOH K1=1.26

Fe+++ gl NaCl 25°C 0.68M U K1=0.44 B2=0.08 1976BKb (4851)1266

Fe+++ con oth/un 25°C 1.00M U I K1=0.52 1976HBc (4852)1267

Fe+++ kin oth/un 25°C 1.00M U I K1=0.48 B2=0.59 1976SDa (4853)1268
Kout(Fe+Cl)=0.34

Fe+++ oth NaClO₄ 21°C 0.10M U T K1=0.92 1976YKa (4854)1269

Fe+++ sp mixed 25°C ? U T K1=4.30 B2=7.30 1974WSa (4855)1270
Medium: DMF(wet), 0.2 M NaClO₄. K1=4.3(16 C)

Fe+++ sp oth/un ? ? U K1=0.16 1972KKf (4856)1271

Fe+++ dis NaClO₄ 25°C 4.0M U K1=0.88 B2=0.80 1972STb (4857)1272

Fe+++ dis non-aq 25°C 100% U 1972WIa (4858)1273

K(H+FeCl₄)=2.3
K(HFeCl₄+Cl)=1.7

Medium: methylisobutylketone

Fe+++ EMF non-aq 25°C 100% U 1971DTb (4859)1274

B3=15.55

K4=4.25

Medium: SeOCl₂, 0.5 M (C₂H₅)₄NClO₄

Fe+++ sp oth/un rt var U B2=0.06 1971KGa (4860)1275

K(FeL₂+3H+4L⁻=H₃FeL₆)=-6.67

Fe+++ sp NaClO₄ 25°C 6.0M U TI K1=2.04 1971KRc (4861)1276

Medium: (H,Na)ClO₄. K1=2.08(I=6.5), 2.19(I=7.6), 2.23(I=8.2).

At I=8.2: K1=2.12(12.3 C), 2.35(44.1 C)

Fe+++ sol none 25°C 0.0 U 1971MSj (4862)1277

Kso(Fe(OH)2.86Cl_{0.14})=-38.4

Kso(Fe(OH)2.5Cl_{0.5})=-32.3

Fe+++ oth non-aq 99°C 100% U 1971TEb (4863)1278

K(FeL₃(s)+SbL₃=SbL₂+FeL₄)=-1.5

Medium: SbCl₃. Method: current-voltage

Fe+++ sp non-aq 25°C 100% U K1=4.74 B2=7.19 1970LHa (4864)1279

Medium: DMSO, 0.1 M NaClO₄

Fe+++ nmr oth/un 25°C var U K1=0.7 1970LSa (4865)1280

Method: esr

Fe+++ sp NaClO₄ 25°C 0.50M U I K1=0.75 1970RSc (4866)1281

Medium: HClO₄. K1=0.72(I=1), 0.99(I=3), 1.24(I=4), 1.56(I=5), 2.04(I=6)

Fe+++ sp NaClO₄ 20°C 0.15M U K1=0.6 1969FOb (4867)1282

K(Fe+ClO₄)=0.3

Fe+++ oth none 50°C 0.0 U T K1=1.96 B2=2.62 1969HEa (4868)1283

B3=1.76

B4=0.05

Estimated from literature data. At 100 C: K1=2.94, B2=3.63, B3=3.00, B4=1.63

At 150 C: K1=3.98, B2=4.72, B3=4.30, B=3.23

Fe+++ dis oth/un 290°C 100% U 1969JSb (4869)1284

K(2FeCl₄=Fe₂Cl₇+Cl)= -3.40

Medium: KFeCl₄. Method: gas chromatography

Fe+++ sp NaClO₄ 20°C 1.20M U M K1=0.66 B2=0.81 1969MAAd (4870)1285

B3=0.83

K(Fe+L+S₀₄)=2.98

Fe+++ dis oth/un 25°C 1.0M U K1=0.63 B2=0.74 1969MWb (4871)1286
Medium: HClO4

Fe+++ EMF oth/un 25°C 4.0M U I K1=1.02 B2=1.0 1969NPb (4872)1287
At I=1.0 M: K1=0.57

Fe+++ EMF oth/un 25°C ? U K1=1.9 B2=2.35 1969PSe (4873)1288
K3=-1.0

Fe+++ sp non-aq rt 100% U 1968DPb (4874)1289
K(Fe2Cl6=FeCl2++FeCl4-)=-3.52

Medium: butylacetate

Fe+++ kin NaClO4 1°C 2.0M U K1=0.23 1968NMc (4875)1290
Medium: LiClO4

Fe+++ EMF NaClO4 25°C 4.0M U I K1=0.5 B2=-0.3 1968PSc (4876)1291
At I=1.0 M, K1=0.3

Fe+++ sp non-aq 25°C 100% U K1=3.62 1968WAa (4877)1292
K2=2.10

Medium: DMSO, 0.10 M NaClO4?

Fe+++ sp oth/un 0.0 U 1967DPa (4878)1293
K4=-2.54 to -2.24

Fe+++ EMF oth/un 25°C 0.0 U 1967LPb (4879)1294
K(Ferricenylmethyl+L)=1.0

Fe+++ EMF oth/un 25°C 0.0 U 1967NPf (4880)1295
K(Fe(C5H5)2+L)=0.45

Fe+++ cal NaClO4 25°C var U IH 1967Vlf (4881)1296
Medium: HClO4. DH(K1)=-3.22(I=8),1.67(I=7),8.94(I=5),12.1(I=4),13.9(I=3),
16.6(I=2) kJ mol⁻¹. Also thermodynamic data at other temp. and I

Fe+++ oth NaClO4 25°C 8.0M U I K1=3.13 1967Vlf (4882)1297
From survey of literature data. Medium: HClO4
K1=2.46(I=7),1.50(I=5),1.10(I=4),0.76(I=3),0.53(I=2),1.38(I=0 corr)

Fe+++ cal NaClO4 33°C 4.0M U TIH 1967Vlf (4883)1298
Medium: HClO4. DS(K1)=54.3(10 C),73.2(55 C)J K⁻¹ mol⁻¹ plus many other data

Fe+++ gl NaCl 25°C 0.50M U 1966BCa (4884)1299
Ks(FeH2.7)=3.04
Ks(FeH2.7Cl0.3)=2.95

Fe+++ con oth/un 25°C var U 1966Kwa (4885)1300
K1in/K1out=-0.37

Also used: pressure-jump

Fe+++ sp non-aq 25°C 100% U K1=3.72 B2=5.76 1966WRa (4886)1301
Medium:Me2SO, 0.1 M NaClO4, 0.02 M HClO4

Fe+++ sp non-aq 100% U I B4/B2 > 10 1965DCa (4887)1302

Medium:MeCONMe2

Fe+++ sp non-aq 25°C 100% U IH K3/K4=-1.55 1965SLb (4888)1303

Medium: pyridine, K3/K4=1.42 in Me2NCHO; >= 3 in MeCN, MeNO2
DH=49.3 kJ mol⁻¹, DS=133.8 J K⁻¹ mol⁻¹ in pyridine

Fe+++ con oth/un 25°C var U K1=1.32 1964HMa (4889)1304
At 1 bar. K1=-0.4(2100 bar)

Fe+++ cal oth/un ? i U IH 1964PCa (4890)1305
DH(K1)=17.9(I=1.0), 14.4(I=3.7) kJ mol⁻¹

Fe+++ oth oth/un 0.0 U K3K4=-4.54 1964VGa (4891)1306

Method:electrical migration or transference number

Fe+++ sp NaClO4 23°C 10.0M U I K1=1.68 1963HCa (4892)1307
Medium:5 M NaClO4+5 M HClO4. K1=1.62(+4 M HClO4), 1.54(+3 M), 1.45(+2 M), 1.39
(+1 M HClO4). In 5 M HClO4:K1=1.68, 1.30(4 M), 0.89(3 M), 0.70(2 M), 0.59(1 M)

Fe+++ oth NaClO4 25°C 2.0M U M K(Fe(C5H5)2+L)=0.48 1963PDa (4893)1308

Fe+++ dis non-aq 22°C 100% U I K(H(org)+FeCl4(org))=6.15 1962MSf (4894)1309

Medium: benzene. K: H(org)+FeCl4(org)=HFeCl4(org). K=6.3(C6H5Cl),
4(o-C6H4Cl2), 4.2(C6H5NO2)

Fe+++ EMF NaClO4 25°C 1.0M U T H K1=0.46 1962WGa (4895)1310
Medium: HClO4. K1=0.36(14.3, 16 C), 0.49(30.1 C), 0.57(35.4 C), 0.68(44.3 C)
DH(K1)=18 kJ mol⁻¹, DS=70.7 J K⁻¹ mol⁻¹(25C). By calorimetry: DH(K1)=19

Fe+++ sp NaClO4 25°C 1.0M U T H K1=0.47 1962WGa (4896)1311
medium: HClO4. K1=0.56(35 C), 0.66(45 C). Also in 3.5 M HClO4.
DH(K1)=17 kJ mol⁻¹, DS=65.7 J K⁻¹ mol⁻¹(25C)

Fe+++ sp NaClO4 25°C 0.50M U IH K1=0.64 1961SRb (4897)1312
Medium: HClO4. DH(K1)=21 kJ mol⁻¹, DS=100 J K⁻¹ mol⁻¹(25 C)
In 0.5 M DClO4 in D2O: K1=0.94, DH(K1)=18

Fe+++ dis NaClO4 25°C 0.20M U I K1=0.78 1961WKb (4898)1313
Medium: HClO4. K1=0.71(I=0.3), 0.66(I=1.0).
In 0.97 M HCl: K(Fe+3Cl+2(C8H17)3NHCl(C6H6))=((C8H17)3NH)2FeCl5(C6H6))=3.51

Fe+++	ix	none	25°C	0.0	U		K2=>-0.7 K3=-1.40 K4=-1.92 K(FeCl4+H=HFeCl4)=2.7	1960MAc	(4899)1314

Fe+++	sp	NaClO4	22°C	1.38M	U	H		1959CCa	(4900)1315
Medium: HClO4. DH(K1)=25 kJ mol-1									

Fe+++	sp	NaClO4	25°C	2.50M	U	IH	K1=0.62	1959CNa	(4901)1316
Medium: HClO4, K1=0.76(C=3), 1.10(C=4), 1.96(C=6), 3.13(C=8), 3.47(8.5), 3.79(9). DH(K1)=16(C=3), -9.6(C=8.5) kJ mol-1, DS=67(C=3), 34(C=8.5) J K-1 mol-1.									

Fe+++	con	non-aq	20°C	100%	U			1959GBb	(4902)1317
							K(FeCl3POCl3=POCl2+FeCl4)=-2		
Medium: POCl3									

Fe+++	dis	oth/un	25°C	0.0	U		K2=-0.57 K3=-2.96	1959MEb	(4903)1318

Fe+++	sp	diox/w	30°C	100%	U	I		1959MKa	(4904)1319
							K(FeCl3+HCl=HFeCl4)=0.85		
K=2.6(THF), 2.7(Bu2O), 4.0(i-Pr2O)									

Fe+++	sp	non-aq	30°C	100%	U		K1=2.88 B2=3.99	1959RWa	(4905)1320
Medium: CH3CONHCH3									

Fe+++	sp	non-aq	?	100%	U			1956SCa	(4906)1321
							K4=2.34		
Medium: pyridine									

Fe+++	sp	NaClO4	25°C	1.20M	U		K1=0.61 B2=0.79	1955LRa	(4907)1322

Fe+++	sp	none	20°C	0.0	U			1953GJa	(4908)1323
							K3=-0.14 K4=-1.98		

Fe+++	EMF	none	16°C	0.0	U		K1=1.45	1950BAa	(4909)1324

Fe+++	sp	NaClO4	20°C	2.0M	U		K1=0.76 B2=1.06	19430La	(4910)1325
							K3=-0.06		

Fe+++	EMF	KNO3	25°C	0.53M	U		K1=0.36	1942BRa	(4911)1326

Fe+++	sp	none	25°C	0.0	U	IH	K1=1.48 B2=2.13	1942RSa	(4912)1327
							K3=-1.0		
I=0 corr. DH(K1)=36 kJ mol-1, DS=150 J K-1 mol-1. In 1 M NaClO4, 26.5 C: K1=0.62, K2=0.11, K3=-1.40									

Fe+++	sp	NaClO4	?	.665M	U		K1=0.11	1941BFa	(4913)1328

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Fe+++      EMF none    20°C   0.0   U           K1=1.41          1939LIa  (4914)1329
-----
Fe+++      EMF none    25°C   0.0   U           K1=0.61          1937MOB  (4915)1330
-----
Fe+++      EMF oth/un  25°C   var   U   I       K1=0.48          1929PKa  (4916)1331
At I=0 corr.: K1=1.30
*****

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ClO2-      HL      Chlorite      CAS 13898-47-0  (6143)
Chlorite;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      kin NaClO4  5°C   1.00M U           K1=1.12          1993FEa  (6009)1332
-----
Fe+++      sp   NaClO4  25°C   1.00M U           K1=1.14          1991FGa  (6010)1333
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ClO3-      HL      Chlorate      CAS 7790-93-4  (971)
Chlorate;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      dis oth/un  25°C   1.0M U T H       K1=-0.40 B2=-0.80  1971MHb  (6035)1334
Medium: HClO4. DH(K1)=22.2 kJ mol-1,DS=67 J K-1 mol-1; DH(K2)=-74.9,DS=-259.
K1=-0.54,K2=0(15 C); K1=-0.47,K2=-0.2(20 C); K1=-0.34,K2=-0.7(30 C)
*****

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ClO4-      HL      Perchlorate  CAS 7001-90-3  (287)
Perchlorate;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      nmr non-aq  25°C   100% U           K1=2.04 B2=3.92  1989SKb  (6240)1335
K(FeA3+L)=0.48
Medium: acetonitrile. A=3,4,5,6,7,8-hexamethyl-1,10-phenanthroline
-----

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Fe+++      sp   NaClO4  20°C   0.40M U           K1=0.0          1988FWa  (6241)1336
-----

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Fe+++      sp   NaClO4  25°C   var   U           K1=0.7          1973MHa  (6242)1337
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Fe+++      sp   NaClO4  20°C   0.15M U           K1=0.3          1969FOb  (6243)1338
-----

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Fe+++      EMF oth/un  25°C   0.0   U           1967LPb  (6244)1339
K(ferricenylmethyl+L)=1.77
-----

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Fe+++      EMF oth/un  25°C   0.0   U           1967NPf  (6245)1340
K(Fe(C4H5)2+ +L)=1.2
-----

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```

Fe+++      sp   NaClO4  25°C   .044M U   I       K1=0.57          1959SYa  (6246)1341
K1=0.83(I=0.024 M), 1.15(I=0 corr.)
-----

```

Fe+++ sp NaClO4 19°C 0.15M U I K1=0.53 1954SYa (6247)1342
K1=1.28(I=0 corr.)

Fe+++ sp none ? 0.0 U K1=-0.32 1952Sub (6248)1343

CrO4-- H2L Chromate CAS 7738-94-5 (2382)
Chromate;

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

Fe+++ sol none 25°C 0.0 M T H K1=7.8 1996BPd (6487)1344
Kso(KFe3(CrO4)2(OH)6)=-18.4

Method: solubility of KFe3(CrO4)2(OH)6 at pH 1.5-3.0 (HClO4)
and 4-35 C. DH(K1)=19.1 kJ mol-1, DS(K1)=214 J K-1 mol-1.

Fe+++ gl none 25°C 0 U K1=7.77 1994OEa (6488)1345
Kso(FeOHL.2Fe(OH)3)=-99.8

Fe+++ sp NaClO4 25°C 0.20M U T H 1972BTc (6489)1346
*K1=0.29
1 C: *K1=0.09. 9.3 C; *K1=0.17. 17.2 C; *K1=0.23. DH(*K1)=12.9 kJ mol-1

Fe+++ kin NaClO4 25°C 1.00M U 1969EHb (6490)1347
*K1=-0.37

By spectrophotometry: *K1=-0.35

Fe+++ sp oth/un 0°C .084M U 1963EKa (6491)1348
*K1=0.15

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

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

Fe+++ sp KCl 25°C 0.10M C T H 2002PCb (6868)1349
K(FeP+F)=1.58
K(FeA+F)=0.08

Data for 10-35 C. DH(FeP+F)=-8.4 kJ mol-1, DS=2 J K-1 mol-1. DH(FeA+F)=
-7.0, DS=-22. P is sperm whale myoglobin; A is N-acetyl-microperoxidase

Fe+++ dis NaClO4 25°C 0.30M C I K1=11.22 1997SSe (6869)1350
Method: extraction of 59Fe from 0.3 M NaClO4/HClO4 into benzene/
thenoyltrifluoroacetone. Data for 0-0.308 mole fraction MeOH in H2O.

Fe+++ EMF NaCl 25°C 0.68M C K1=5.155 B2= 9.11 1996SBa (6870)1351
B3=11.96
B4=13.72
B(FeH-1F)=1.39

Method: Pt/Fe(III),Fe(II) electrode, glass electrode, fluoride i.s.e.
Medium: 0.68 m NaCl.

By extrapolation of literature data using Pitzer equations.
At $I=0.72$ M, $K_1=5.24$, $B_2=9.46$, $B_3=11.84$.

$$K(\text{FeA}+\text{F})= 3.46(\text{H3A}=\text{NTA}), 3.31(\text{H3A}=\text{HEDTA}), 1.7(\text{H4A}=\text{EDTA}), 1.5(\text{H4A}=\text{CDTA})$$

Fe+++ ISE NaCl04 25°C 0.50M C I 1975J0b (6874)1355
K(Fe+HF=FeF+H)=2.28

Fe+++ gl oth/un 20°C 3.30M U I K1=4.36 B2=8.61 1975KFα (6875)1356
K3=4.03
K4=3.85

Fe+++ ISE NaCl04 25°C 0.50M U K1=5.16 B2=9.07 1969ALa (6877)1358
B3=12

Fe+++ sp NaCl04 2°C 1.0M U 1969CEb (6878)1359
K(Fe+HF=FeF+H)=2.22

Fe+++	vlt	NaClO4	?	1.0M	U	K1=5.41	B2=9.85	1969SGh	(6879)1360
						K3=2.49			

[illegible]

Fe+++ sp alc/w ? 100% U K1=5.46 B2=10.21 1968SGk (6881)1362
K3=3.78
K4=3.30
K5=2.83
K6=2.78(2.68?)

```
Fe+++      ISE NaClO4 25°C  1.0M U      K1=5.06      1968SRC  (6882)1363
Method:F membrane electrode
```

Fe+++ cal NaClO4 25°C 0.50M U H 1967AHa (6883)1364

DH(K1)=9.8 kJ mol⁻¹, DS=131.7 J K⁻¹ mol⁻¹. By redox, I=0: DH(K1)=14.2, DS=163

Fe+++ EMF NaClO4 25°C 1.0M U K1=2.23 B2=3.17 1967WCa (6884)1365
K3=0.08

Fe+++ oth oth/un ? var U K1=5.76 B2=10.20 1964BSc (6885)1366
Method:refractometry.

Fe+++ EMF NaClO4 25°C 0.50M U 1964PCa (6886)1367
K(Fe+HF=FeF+H)=2.21
K(FeF+HF=FeF2+H)=1.05
K(FeF2+HF=FeF3+H)=-0.20

Fe+++ EMF NaClO4 27°C 0.50M U 1961YAA (6887)1368
K(Fe+HF=FeF+H)=2.26
K(FeF+HF=FeF2+H)=1.04

Fe+++ cal NaClO4 25°C 0.50M U H 1959SCe (6888)1369
DH(*K1)=-2.4 kJ mol⁻¹, DS=35 J K⁻¹ mol⁻¹; DH(*K2)=-7.0, DS=-3.8; DH(*K3)=-8.5, DS=-28

Fe+++ kin NaClO4 0°C 0.05M U K1=5.40 1957SMA (6889)1370

Fe+++ EMF NaClO4 25°C 0.50M U T H K1=5.17 B2=9.09 1956CHb (6890)1371
K3=2.91

At 15 C: K1=5.13, K2=3.91, K3=2.85. 35 C: K1=5.25, K2=4.00, K3=3.00
DS(K1)=126 J K⁻¹ mol⁻¹, DS(K2)=96, DS(K3)=75 ? At 0.11 C K1=5.03

Fe+++ ix oth/un 25°C 0.35M U 1956KAb (6891)1372
K(FeF6+H=HFeF6)=4.51

Medium: KF

Fe+++ EMF NaClO4 25°C 0.50M U H 1955PAa (6892)1373
DH(K1)=9.8 kJ mol⁻¹, DS=130 J K⁻¹ mol⁻¹; DH(K2)=7.41, DS=100; DH(K3)=12.5, DS=96. At I=0 corr: DS(K1)=163, DS(K2)=121, DS(K3)=105

Fe+++ EMF NaClO4 25°C 0.50M U T H 1955YAA (6893)1374
K(Fe+HF=FeF+H)=2.26
K(FeF+HF=FeF2+H)=0.99
K(FeF2+HF=FeF3+H)=-0.10

At 5 C: *K1=2.30, *K2=1.12, *K3=-0.04. At 50 C: *K1=2.23, *K2=0.94, *K3=-0.52
DH(*K1)=-2.6 kJ mol⁻¹, DS=62 J K⁻¹ mol⁻¹; DH(*K2)=-6.9, DS=10

Fe+++ EMF NaClO4 25°C 0.50M U K1=5.21 B2=9.16 1953HWA (6894)1375
K3=2.70

Fe+++ kin NaClO4 0°C 0.50M U K1=4.99 B2=8.88 1953HWA (6895)1376
K3=3.00

Fe+++ sp NaClO4 25°C 0.52M U K1=5.14 1953SAa (6896)1377

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-----
Fe+++      sp  none      ?   0.0  U   H   K1=4.90      1951EUa  (6897)1378
DH(K1)=31 kJ mol-1, DS=205 kJ mol-1
-----
Fe+++      EMF NaCl04 25°C 0.50M U      1949DRa  (6898)1379
                                         K(Fe+HF=FeF+H)=2.28
                                         K(FeF+HF=FeF2+H)=1.02
                                         K(FeF2+HF=FeF3+H)=-0.24
-----
Fe+++      sp  oth/un    ?   var  U      K1=5.30      1947BKb  (6899)1380
-----
Fe+++      EMF KNO3    25°C 0.53M U      K1=5.15      B2=9.15      1942BRa  (6900)1381
-----
Fe+++      EMF none    20°C 0.0  U      K1=5.52      1939LIa  (6901)1382
*****
HP03--      H2L      Phosphite      CAS 13598-36-2  (6305)
Phosphite;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  oth/un 24°C 0.0  U      1966MAi  (7509)1383
                                         K(Fe+HL)=4.71
                                         K(FeHL+HL)=2.92
Medium: 0 corr. By redox: K(Fe+HL)=5.0, K(FeHL+HL)=2.17
-----
Fe+++      sp  alc/w 21°C 100% U T      K1=5.77      B2=9.11      1964POb  (7510)1384
                                         K3=3.04
Medium: MeOH
*****
H2P02--      HL      Hypophosphite      CAS 6303-21-5  (6304)
Hypophosphite;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      kin NaCl04 25°C 1.00M U      1969EDa  (7645)1385
                                         K(Fe+H3L=FeH2L+H)=2.18
-----
Fe+++      sp  oth/un 20°C 0.20M U      K1=4.01      B2=6.79      1967MAk  (7646)1386
                                         K3=2.17
-----
Fe+++      EMF NaCl04 25°C 0.13M U      K1=3.62      B2=6.40      1964NMd  (7647)1387
Medium: 0.13 M HCl04,0.1 H+. No correction for HL
-----
Fe+++      sp  oth/un    ?   var  U      K1=2.77      1950BAb  (7648)1388
*****
I-          HL      Iodide      CAS 10034-85-2  (20)
Iodide;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe+++ EMF NaClO4 25°C 0.10M U K1=2.85 B2=1.57 1965NPc (8025)1389
Medium: HClO4

Fe+++ kin KNO3 25°C 0.09M U I K1=1.30 1936HBa (8026)1390
At I=0 corr. K1=1.88

MoO4-- H2L Molybdate (443)
Molybdate;

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

Fe+++ sol oth/un ? var U K1=7.90 1964ZLa (8730)1391

Fe+++ sp NaClO4 ? 0.05M U K1=7.86 1963LZa (8731)1392
B3=16.35

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

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

Fe+++ sp NaNO3 30°C 1.50M U M 1993BGc (9153)1393

K(FeA2B+L=FeABL)=1 to 2.18
K(FeABL+L=FeBL2)=2.48 to 3.78
K(FeABC+L=FeBCL)=-0.22to-0.046
K(FeA2B+2L=FeBL2)=4.64 to 4.92

A:H2O. H6B:5,10,15,20-Tetrakis(2,6-dimethyl-3-sulfonatophenyl)porphyrin.
C:OH.

Fe+++ sp alc/w 25°C 80% U M 1993MBb (9154)1394

K(FeP+L)=3.34

Medium: 80%MeOH/H2O, 0.1 M KCl. P: porphyrin microperoxidase-8.

Fe+++ gl R4N.X 25°C 5.00M U K1=3.8 1985MMa (9155)1395

Fe+++ oth none 25°C 0.0 U K1=4.3 1976HMb (9156)1396

Calculated from linear free energy relationships

Fe+++ sp NaClO4 25°C 0.95M U M 1961JAa (9157)1397

K(Fe(CN)5A+L=Fe(CN)5L+A)=1.47
K(Fe(CN)5B+L=Fe(CN)5L+B)=0.59

A=SCN, B=N3

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

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

Fe+++ sp alc/w 25°C 80% U 1993BHa (9264)1398

K(FeP+L)=2.7

Medium: 80%MeOH/H2O. P: porphyrin microperoxidase-8.

NO L Nitric oxide CAS 10102-43-9 (850)

Nitric oxide;

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

Fe+++ sp oth/un 25°C var C TIH 2003NYa (9304)1399

K(FeP+NO)=0.15

K'(FeP'+NO)=0.22

Medium: HClO4/NaClO4 (I=0.01-3.0 M). Data for 10-30 C. DH(K)=-62.3 kJ m-1

DH(K')=-55.2. P: tetra(4-sulfonatophenyl)porphyrin. P': tris(4-sulfonato-

Fe+++ sp NaClO4 25°C 1.0M U 1973SMa (9305)1400

K((Coen2SO3(OH2)+Fe(CN)5NO)=4

Fe+++ sol oth/un 25°C dil U M 1958YBa (9306)1401

Ks(HgFe(CN)5L=Hg+Fe(CN)5L)=-8.82 ?, pH=3.7-5

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

Nitrite;

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

Fe+++ gl NaClO4 25°C 1.0M C K1=2.59 B2=3.7 1986AEb (9369)1402

B3=5.45

Fe+++ sp NaClO4 25°C 0.01M U K1=2.87 1976TBa (9370)1403

Fe+++ sp oth/un 35°C 1.0M U T H 1966SRa (9371)1404

K(Fe(CN)5+L)=3.24

Medium: 1 M NaCl, 0.2 OH-. K=4.0(10 C), 3.52(25 C). DH=-51.4 kJ mol-1,

DS=-105 J K-1 mol-1

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

Nitrate;

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

Fe+++ sp NaClO4 20°C 0.40M U K1=-0.22 1988FWa (9679)1405

Fe+++ dis oth/un 25°C 0.1M C 1984PKb (9680)1406

Kout(Fe(phen)3+L)=1.57

Kout(Fe(phen)3+2L)=1.75

Medium: KH2PO4; also for I=0.25 M K1out=1.29, B2out=1.56; I=0.5 M Kout=0.93

I=0.75 K1out=0.57; extraction H2O/CHCl3; phen=phenantroline

Fe+++ gl NaNO3 25°C 1.0M U 1973DCa (9681)1407

*Kso(Fe(OH)2L)=2.20

Fe+++ sp KNO3 25°C var U 1970KSg (9682)1408
 K(Fe+3L+HL)=-1.6
 B(FeH3L6)=-2.1 (?)

Medium: HNO3

Fe+++ dis NaClO4 25°C 1.0M U T H K1=-0.23 1969MSe (9683)1409
 K1=0.12(10 C), -0.09(20 C), -0.28(30 C), -0.55(40 C), DH(K1)=-38 kJ mol-1

Fe+++ con oth/un 25°C ? U K1=0.76 1964HMa (9684)1410
 Pressure 1 bar. K1=0.66(4800 bar)

Fe+++ con oth/un 25°C 0.0 U K1=1.00 1959MAd (9685)1411

Fe+++ kin NaClO4 20°C 0.60M U I K1=-0.22 1952SYa (9686)1412
 K1=0.83(I=0.066 M), 1.00(I=0 corr.)

Fe+++ sp NaNO3 26°C 1.0M U K1=-0.5 1951IDa (9687)1413

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

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

Fe+++ sp alc/w 25°C 80% U 1993BHa (10081)1414
 K(FeP+L)=3.8

Medium: 80%MeOH/H2O. P: porphyrin microperoxidase-8.

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

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

Fe+++ sp KCl 25°C 0.10M C T H 2002PCb (10209)1415
 K(FeP+N3)=4.10
 K(FeA+N3)=1.33

Data for 10-35 C. DH(FeP+N3)=-41.0 kJ mol-1, DS=-59 J K-1 mol-1.DH(FeA+N3)
 =-19, DS=-38. P is sperm whale myoglobin; A is N-acetyl-microperoxidase

Fe+++ gl NaClO4 25°C 3.00M C K1=5.35 B2=8.19 1986NAa (10210)1416
 B3=10.13
 B4=11.50
 B5=12.49

Fe+++ gl NaClO4 25°C 1.00M C H K1=4.51 B2=7.48 1980AVa (10211)1417
 B3=9.58
 B4=11.0
 B5=11.8

Fe+++ sp NaClO4 25°C 1.00M U K1=4.30 1976AAa (10212)1418

Fe+++	sp	oth/un	20°C	0.05M	U	M		1976BAd (10213)1419
							K(FeA+L)=5.71 K(FeB+L)=5.37 K(FeC+L)=5.58 K(FeD+L)=5.43	
FeA=heme, FeB=alpha-heme, FeC=beta-heme, FeD=alpha2-beta2-(CO)2-heme + other								

Fe+++	sp	NaClO4	1.6°C	1.0M	U		K1=-0.44	1969CEb (10214)1420
Medium: HClO4								

Fe+++	vlt	NaClO4	25°C	2.0M	U			1969SNa (10215)1421
							B3=10.4	

Fe+++	sp	NaClO4	25°C	1.0M	U			1967CEa (10216)1422
							K(Fe+HL=FeL+H)=-0.29	
Medium: LiClO4. By kinetics: K=-0.30								

Fe+++	sp	NaClO4	28°C	0.25M	U	I	K1=0.80	1965MKa (10217)1423
K1=1.00(I=0.15), 1.73(I=0.05)								

Fe+++	sp	NaClO4	20°C	0.0	U	TIH	K1=4.83	1961BDd (10218)1424
							*K1(Fe+HL=FeL+H)=4.83	
*K1=-0.12(I=0.75), -0.09(I=0.55), -0.01(I=0.22), -0.06(I=0.11). I=0.25: *K1=-0.04(15 C), 0.02(25 C), 0.08(35 C). DH(*K1)=10.5 kJ mol-1, DS=34.7 J K-1 mol-1								

Fe+++	sp	oth/un	20°C	0.0	U	T H	K1=5.08	1961BDd (10219)1425
Medium: D2O, I=0 corr. *K1=-0.07(23 C), -0.04(28 C), -0.01(33 C). DH(*K1)=10.5 kJ mol-1, DS=33 J K-1 mol-1								

Fe+++	sp	NaClO4	25°C	0.95M	U	M		1961JAa (10220)1426
K(Fe(CN)5SCN+L=Fe(CN)5L+SCN)=0.88								

Fe+++	sp	NaNO3	20°C	var	U	IH		1961WDa (10221)1427
							*K1=0.23	
DH(*K1)=8.4 kJ mol-1, DS=33 J K-1 mol-1								

Fe+++	oth	oth/un	25?°C	?	U	H	K1=5.0	1959BDc (10222)1428
Medium: D2O. DS(K1)=81 kJ mol-1								

Fe+++	sp	oth/un	?	0.05M	U		K1=2.51	1959ESa (10223)1429
HL neglected ?								

Fe+++	sp	oth/un	?	dil	U		K1=2.06	1958ESa (10224)1430
							*K1=-0.1	
HL neglected ?								

Fe+++	con	oth/un	?	0.0	U		K1=5.06	1953BAa (10225)1431

Fe+++	sp	oth/un	?	?	U	H	K1=4.11	1951EUa (10226)1432
DH(K1)=-18.0 kJ mol-1, DS=20.9 J K-1 mol-1								

 Fe+++ sp oth/un ? ? U K1=5.30 1950BAa (10227)1433

OCN- HL Cyanate CAS 661-20-1 (6165)
 Cyanate, Fulminate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	kin	NaClO4	2°C	1.0M	U			1969CEb (10295)1434	
							*K1=1.1		

Medium: 1M HClO4

Fe+++	sp	NaClO4	?	0.70M	U		K1=2.15 B2=2.56	1966LOa (10296)1435	
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Fe+++	sp	oth/un		var	U		B2=3.72	1966LPb (10297)1436	
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OH- HL Hydroxide (57)
 Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	EMF	NaClO4	25°C	0.10M	C	I		2005BYa (11354)1437	
							*B1=-2.54		

Pt/Fe(3+),Fe(2+) electrode. Data for 0.01-6.0 m NaClO4 and 0.1-6.2 m HClO4. *B1=-2.179 (I=0), -2.73 (I=0.70 m), -2.77 (I=6.0 m NaClO4).

Fe+++	EMF	NaCl	25°C	0.10M	C	TIH		2005BYa (11355)1438	
							*B1=-2.78		

Pt/Fe(3+),Fe(2+) electr. Data for I=0.1-6.0 m NaCl, 4-54 C. *B1 includes effects of Cl- complexation. At I=0.7 m, *B1=-3.21 and DH=26.0 kJ mol⁻¹.

Fe+++	EMF	NaCl	25°C	0.70M	C			2005BYa (11356)1439	
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Pt/Fe(3+),Fe(2+) electrode. *Kso(Fe(OH)3)=4.62 (fresh).
 lg [Fe+++]=4.62-2.73(pH), indicating solid phase Fe(OH)_n, where n=2.73.

Fe+++	gl	NaClO4	25°C	3.0M	C			2003CIa (11357)1440	
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K(Fe+H2O=FeOH+H)=-3.05
 K(Fe+2H2O=Fe(OH)2+2H)=-6.31
 K(2Fe+2H2O=Fe2(OH)2+2H)=-2.96
 K(3Fe+4H2O=Fe3(OH)4+4H)=-5.77

At 20 C: K(Fe+3H2O=Fe(OH)3+3H) <-12.7, K(Fe+4H2O=Fe(OH)4+4H)=-22.7
 K(12Fe+34H2O=Fe12(OH)34+34H)=-46.1 Results never published

Fe+++	oth	oth/un	20°C	0.7M	C			2003SHb (11358)1441	
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*B2=-6.40
 *B3=-15.1
 *B4=-22.70

Medium: Uv-treated seawater. Method: adsorption of ⁵⁹Fe-labelled Fe(OH)_n species from EDTA solution onto C18/silica.

Fe+++ gl oth/un 25°C 0.74M C TI 2002LMa (11359)1442

*K1=-2.5

*B2=-6.5

*B3=-13.6

*Kso(Fe(OH)3)=4.13

Salinity = 36‰. Data for 5 and 50 C and seawater salinity, S, 0 to 36‰.

At 5 C and S=36, *K1=-2.8, *B2=-7.6, *B3=-14.7, *Kso(Fe(OH)3)=5.34.

Fe+++ gl NaNO3 25°C 0.10M C 2002MDa (11360)1443

*K1=-1.62

*B2=-4.28

*B3=-7.91

Fe+++ sp KCl 25°C 0.10M C T H 2002PCb (11361)1444

*K(FeA(H2O))=-9.59

Data for 10-35 C. DH(*K)=33.9 kJ mol⁻¹, DS=-70 J K⁻¹ mol⁻¹.

A is N-acetyl-microperoxidase

Fe+++ gl NaClO4 25°C 0.70M C IH 2000BLa (11362)1445

*K1=-2.74

*B2=-6.1

*Kso=3.84

Data for 0.01-6.0 M. *K1=-2.54 (I=0.10), *K1=-2.18 (I=0). From data at 5-56 C (I=0.725 m), DH(*K1)=42.7 kJ mol⁻¹. Method: pH and Pt/Fe(III)/Fe(II).

Fe+++ gl NaCl 25°C 2.84M C 2000BLa (11363)1446

*B2=-6.86

B(Fe+Cl=Fe(OH)Cl+H)=-3.16

Additional method: Pt/Fe(III),Fe(II) electrode.

Fe+++ EMF NaClO4 20°C 0.70M C 2000BLb (11364)1447

*Kso(Fe(OH)3)=4.28

Method: Pt/Fe(+++),Fe(++) electrode.

lg [Fe+++]=4.28-2.86(pH), indicating solid phase Fe(OH)_n, where n=2.86.

Fe+++ gl KNO3 20°C 0.1M C I 2000DSa (11365)1448

*B2=-6.14

*B(2,2)=-2.79

In 0.05 M KNO3: *B2=-6.40, *B(2,2)=-2.79.

Fe+++ sol oth/un 60°C 0.0 C T 1999DSc (11366)1449

Method: solubility of hematite in NaCl (0.01-0.02 m)/ NaOH (pH 9.3-13.1).

Ks(0.5Fe2O3+2.5H2O=Fe(OH)4+H)=19.64. Data for 60-300 C.

Fe+++ sp NaClO4 25°C 1.0M C 1999Lfa (11367)1450

*K1=-2.72

*B(2,2)=-2.86

Fe+++ sol NaCl 25°C 0.7M C TI 1999LMb (11368)1451

*K1=-2.52

Method: radioanalytical (53Fe). $K(\text{Fe}(\text{OH})_3(\text{s})+3\text{H})=4.16$. Data for 5-50 C and 0.1-5.0 M NaCl. At I=0.0 M, *K1=-2.1, *B2=-6.3, *B3=-14.3, *B4=-22.3.

Additional method: Pt/Fe electrode.

Medium: 80% w/w DMSO/H₂O, 0.5 M NaClO₄.

Method: dissolved Fe determined via ^{59}Fe .

Competition with fluoride. Medium: 0.68 m NaCl.

At I=0.72 M, *K1=-2.62, *B2=-6.0, *B3=-12.5, *B4=-21.8.

By dissolution of $\text{Fe}(\text{OH})_3$ in seawater.

Also data at I=0.1, 0.5, 1 and 3 M. At I=0.1 M, *K1=-2.57, *B2=-5.9,

*B(2,2)=-2.88, *B(12,34)=-55.2.

Fe+++ sp NaNO3 30°C 0.20M U M 1993BGc (11377)1460

*K(FeB(H2O)2)=-6.75

H6B:5,10,15,20-Tetrakis(2,6-dimethyl-3-sulfonatophenyl)porphirin.

Fe+++ kin NaCl 25°C 0.10M U 1992ALa (11378)1461

*K(FeA(P04)(H2O))=-4.02

FeA=purple acid phosphatase.

Fe+++ gl NaCl04 25°C 0.50M U I 1992DEa (11379)1462

*K(Fe(EDTA)(H2O))=-7.2

At I=0.001 M NaCl04, *K=-7.8

Fe+++ gl NaNO3 25°C 0.50M C 1990DJa (11380)1463

*K1=-2.58

*B(2,2)=-3.15

*B2=-6.36

Additional method: spectrophotometry.

Fe+++ gl NaNO3 25°C 0.50M C 1990DJa (11381)1464

*K1=-2.58

*B2=-6.36

*B(2,2)=-3.15

Fe+++ gl NaCl04 25°C 0.0 C I 1990SVb (11382)1465

*K1=-1.98

*B2=-4.4

*B(2,2)=-2.86

*B2=-4.4(min) to -4.65(max). Data for I=0.51-3.50 m NaCl04, extrapolated to I=0 using SIT. At I=1.05 m, *K1=-2.80, *B2=-5.8, *B(2,2)=-2.83.

Fe+++ gl NaCl 25°C 3.0M C 1989MDa (11383)1466

*K1=-4.20

*B(2,2)=-4.64

Fe+++ sp oth/un 25°C 0.00 U I M 1989MMa (11384)1467

*K(FeApy=FeApy(OH)+H)=-9.8

*K(FeBpy=FeBpy(OH)+H)=-9.2

*K(FeCpy=FeCpy(OH)+H)=-10.2

*K(FeDpy+FeDpy(OH)+H)=-9.7

In sodium dodecyl sulphate micelles.py=pyridine. A=protoporphyrin IX; B=deuteroporph.IX dimethyl ester; C=mesoporph.IX di-ester; D=protoporph.IX di-ester

Fe+++ gl NaNO3 25°C 1.00M C 1988KRb (11385)1468

*K1=-3.01

*B(2,2)=-3.09

*B(3,4)=-6.92

Fe+++ sp NaCl 25°C 0.15M U 1986EMa (11386)1469

					*K1=-3.05	
					*B2=-6.31	
Fe+++	gl	NaClO4	25°C	1.0M	C	1986KBa (11387)1470
						*B(2,2)=-3.20
						*K1=-2.73
						*B2=-6.29
Fe+++	gl	KNO3	25°C	1.0M	C	1986KBa (11388)1471
						*B(2,2)=-3.22
						*B(3,4)=-6.98
						*K1=-2.77
						*B2=-6.61
Fe+++	gl	KCl	25°C	1.0M	C	1986KBa (11389)1472
						*B(2,2)=-4.09
						*B(3,4)=-7.58
						*K1=-3.21
						*B2=-6.73
Fe+++	dis	none	20°C	0.0	C	1985IYc (11390)1473
						Kso=-39.13 (aged 12 mo)
						Kso=-39.74 (aged 36 mo)
Method: extraction using 8-hydroxyquinoline.						
Fe+++	sp	NaClO4	25°C	0.10M	C I	1985MEb (11391)1474
						*K1=-2.52
Data for 0-2.0 M NaClO4. At I=0.20 M: *K1=-2.64. At I=0.50 M: *K1=-2.69						
Also data to 120 MPa.						
Fe+++	sp	NaNO3	20°C	0.20M	C	1982DVa (11392)1475
						*K1=-2.95
Fe+++	nmr	NaClO4	25°C	0.10M	U I	1982YTa (11393)1476
						*K1=-2.72
						*B(2,2)=-3.92 (I=2.0)
Fe+++	sp	NaCl	25°C	0.68M	C	1981BKe (11394)1477
						*K1=-2.71
						*B2=-7.43
Fe+++	sol	none	100°C	0.0	C T	1980TLa (11395)1478
Magnetite solubility under H2. $K_s(1/3Fe_3O_4(s)+H_2O=Fe(OH)_4+1/6H_2+H)=-20.00$						
$K(1/3Fe_3O_4(s)+1/6H_2+5/3H_2O=Fe(OH)_3)=-11.05$. Data for 100-300 C.						
Fe+++	sol	NaClO4	80°C	?	U TI	1980ZKb (11396)1479
						*K1=-1.00
80-200 C						
Fe+++	sp	NaClO4	25°C	0.68M	U T	1978BKb (11397)1480

*K1=-2.72
*B2=-8.60

Fe+++ gl oth/un 25°C 2.00M U 1978YKa (11398)1481
*K1=-3.85
*B(2,2)=-3.71

Fe+++ gl KNO3 25°C 1.00M M 1977CBa (11399)1482
*K(FeAL+H2O=FeAL2+H)=-9.41
K(2FeAL=(FeAL)2)=-2.6
H4A=EDTA

Fe+++ gl NaClO4 25°C 2.67M U TI 1977SPb (11400)1483
*K1=-2.92
*B2=-5.70
*B(2,2)=-3.22
Data for a range of concentrations and T=33 - 80 C

Fe+++ gl oth/un 25°C 0.20M U TI 1977YKa (11401)1484
K(Fe2(OH)2+2H)=3.46
K=3.15 (50 C)
K=3.41 (80 C)

Fe+++ gl NaClO4 25°C 0.68M U I K1=7.28 B2=9.95 1976BKb (11402)1485
In 0.68 M NaNO3: K1=7.04, K2=2.64; in 0.68 M NaCl: K1=7.0, K2=2.76
In seawater: K1=6.80, K2=2.65

Fe+++ sol oth/un 25°C 0.72M C 1976BKc (11403)1486
*Kso(Fe(OH)3)=5.67
*B3=-13.62
Solubility of Fe(OH)3 in seawater, S=36.2. Fe(OH)3 is freshly precipitated

Fe+++ gl NaClO4 25°C 3.00M U 1975Cgb (11404)1487
*K1=-3.1
*B(2,2)=-2.8
*B(12,34)=-46.1

Fe+++ ix NaClO4 18°C 0.1M U K1=11.66 B2=22.07 1975Kie (11405)1488
K(Fe+3OH)=30.70
K(2Fe+3OH)=24.56
K(2Fe+OH)=22.07

Fe+++ sp NaClO4 25°C 0.1M U I 1975KSc (11406)1489
*K1=-2.78
K(2Fe+2H2O=Fe2(OH)2+2H)=-2.10
In D2O: *K1=-1.41, K=-2.15

Fe+++ sp NaClO4 RT 1.0M C I 1975MIb (11407)1490
*K1=-3.07
*B(2,2)=-2.67

*K1=-2.43 (I=0.01 M), -2.67 (0.05 M), -2.84 (0.10 M), -2.94 (0.60 M).

*B(2,2)=-2.55 at I=3.0 M NaClO4.

Fe+++ oth mixed 25°C U 1974NKb (11408)1491

*B(2,1)=-1.5

*B(2,2)=-3.0

Medium: 0.4 M glycerol/H2O. Method: Mossbauer spectroscopy

Fe+++ sol NaClO4 25°C U 1973HMa (11409)1492

*K1=-2.51

*Kso=2.51

Medium: HClO4 at various concentrations; *Kso: $\gamma\text{-FeOOH(s)} + 3\text{H} = \text{Fe} + 2\text{H}_2\text{O}$

Fe+++ sol NaClO4 26°C 1.00M U 1973KUa (11410)1493

B(FeA(OH))=3.5

B(Fe(A)2(OH)4)=44.6

A=triethanolamine

Fe+++ oth NaClO4 20°C 3.00M U 1973VRa (11411)1494

*B(2,2)=-1.9

Method: Mossbauer spectroscopy

Fe+++ kin NaClO4 18°C 1.00M U I 1972KHa (11412)1495

*K1=-2.9

In 1 M LiNO3, *K1=-2.6. In 1 M KNO3, *K1=-2.7

Fe+++ kin oth/un ? 0.40M U 1972KHa (11413)1496

K(FeCl2 + OH)=-1.9

Fe+++ oth none 50°C 0.00 U T 1972LEc (11414)1497

*K1=-1.63

*B2=-5.44

*B(2,2)=-2.2

*K1=-0.12, *B2=-0.95, *B(2,2)=-0.7(150 C). *K1=0.7, *B2=1.45, *B(2,2)=-0.5(250 C)

*K1=1.2, *B2=2.83, *B(2,2)=-0.8(350 C). Combination of thermodynamic data

Fe+++ sp alc/w 25°C 4% U I 1972WEa (11415)1498

*K1=-2.62

in 4% MeOH/H2O, 0.5 M NaClO4. In H2O, *K1=-2.66; 8% MeOH, -2.52;

12%, -2.48; 20%, -2.21; 25%, -2.06; 31%, -2.03

Fe+++ sp alc/w 20°C 20% U T H 1972WEa (11416)1499

*K1=-2.33

Medium: 20% MeOH/H2O, 0.5 M NaClO4. DH(*K1)=48.5 kJ mol⁻¹.

*K1=-2.52(15.5 C), -2.08(30.5 C)

Fe+++ kin oth/un 25°C U 1971HRb (11417)1500

*K2=-5.1

Fe+++ sol none 25°C 0.00 U 1971MSj (11418)1501

$$K_{so}(\text{Fe}(\text{OH})_3) = -42.70$$

Fe+++ EMF NaCl04 25°C 1.00M U 1971NPa (11419)1502
*K1=-2.78

Fe+++ sp NaCl04 25°C 0.25M U 1969BSa (11420)1503
*K1=-2.66
K(2FeOH=Fe2(OH)2)=2.57

Fe+++ sp NaCl04 20°C 0.15M U I 1969F0b (11421)1504
 *K1(Fe+H2O=FeOH+H)=-2.8
 K(Fe + Cl04-)=0.3. In 0.15 M NaCl, *K1=-3.1. In 0.1 M CaCl2, K1=-3.0

Fe+++ sp NaCl04 23°C U 1969MWa (11422)1505
K(Fe(CN)5NO+OH)=3.4
K'=4.1

K': $\text{Fe}(\text{CN})_5\text{NO}^{2-} + 2\text{H}^+ = \text{Fe}(\text{CN})_5\text{NO}_2^{2-} + \text{H}_2\text{O}$. $K(\text{Fe}(\text{CN})_5\text{NO}_2 + \text{H}) = 6.4$
Polarography also used

Fe+++ nmr oth/un 20°C 0.10M U K1=11.3 1969V5a (11423)1506
Method: nmr

Fe+++ cal NaClO4 25°C 3.00M U H 1968ASb (11424)1507
DH(*K1)=45.0 kJ mol-1,DS=96; DH(*B(2,2))=41.8,DS=84; DH(*B(3,4))=59.8,DS=92

Fe+++ sol KN03 25°C var U 1968GSi (11425)1508
 Kso=-38.2(fresh)
 Kso=-39.2(48 h)

Fe+++ sp oth/un 25°C 0.50M U 1968MDd (11426)1509
K(Fe(CN)5NO+L)=0.5 ?
K(Fe(CN)5NO+2L)=4.50

Fe+++	EMF NaCl04 23°C 3.00M U	1968RRa (11427)1510
	*K1=-2.97	
	*K2=-6.98	
	*B(2,1)=-0.98	
	*B(2,2)=-3.0	

Fe+++ EMF NaClO4 25°C 3.00M U T H 1968ZLa (11428)1511

*K1=-3.00
*B(2,2)=-2.36

*K1=-2.73(35 C), -2.52(45 C), DH=42.6 kJ mol⁻¹, DS=84.4 J K⁻¹ mol⁻¹
*B(2,2)=-2.17(35 C), -2.03(45 C), DH=46.6, DS=114

```
Fe+++      sol NaCl04 25°C      U      1967SBa (11429)1512
      *K1=-3.1 to 0
      *K2=-5 to -0.1
      *K3=-7.7 to -1.5
      *K4=-16.9 to -7.3
```

*K5=-15.6 to -11.4. Medium: HClO4 (variable). Polynuclear complexes ignored

Fe+++ sp KCl 15°C 1.00M U T H 1966SRa (11430)1513

K=6.62

K: $\text{Fe}(\text{CN})_5\text{NO}^{--} + 20\text{H} = \text{Fe}(\text{CN})_5\text{NO}_2^{----} + \text{H}_2\text{O}$. K=6.18(25 C), 5.84(35 C).

DH=-67.7 kJ mol⁻¹, DS=-109 J K⁻¹ mol⁻¹

Fe+++ gl oth/un 25°C var U 1965BBd (11431)1514

*K1=-2.90

*K2=-3.38

Fe+++ cal NaClO4 25°C 3.0M U H 1964PCa (11432)1515

DH(*K1)=61.5 kJ mol⁻¹, DH(*B(2,2))=35.1, DH(*B(4,3))=73.6.

Fe+++ oth none 25°C 0.0 U 1963FSa (11433)1516

Kso=-42.7 (alpha-Fe2O3)

Kso(1/2Fe2O3(s)+1.5H2O=Fe+3OH); method:combination of thermodynamic data

Fe+++ sp KNO3 20°C 0.10M U 1963PLb (11434)1517

*K1=-2.63

Fe+++ sp alc/w 20°C 66% U 1963PLb (11435)1518

*K1=-1.77

Medium: 66% w/w MeOH/H2O, 0.1 M KNO3

Fe+++ gl NaClO4 25°C 3.0M U 1963SCg (11436)1519

*Kso=3.55 (amorphous inactive)

*Kso=ca.1.4 (alpha-FeOOH)

*Kso(Fe(OH)3(s)+3H=Fe+3H2O) for amorphous inactive Fe(OH)3, *Kso(FeOOH+3H=Fe+2H2O) for alpha-FeOOH. Redox also used

Fe+++ cal NaClO4 25°C 3.0M U H 1962SCe (11437)1520

DH(*K1)=66.9 kJ mol⁻¹, DS=167; DH(*B2)=71, DS=126; DH(*B(2,2))=36.4, DS=66.1

Fe+++ sp alc/w -59°C 80% U T H 1961Bwa (11438)1521

*K1=-2.49

Medium: 80% MeOH. *K1=-2.45(-50 C), -2.04(-25 C), 1.49(0 C), -1.44(20 C)

DH=16.3 kJ mol⁻¹

Fe+++ sp NaClO4 25°C 0.95M U M 1961JAa (11439)1522

K(Fe(CN)5A+OH=Fe(CN)5OH+A=3.18

A=SCN. When A=N3 K=2.30

Fe+++ sol NaClO4 20°C 3.0M U 1961Lba (11440)1523

Ks3=ca.-7 (apparent)

Ks4=-4.50 (2 hr ageing)

Ks4=-5.00 (96 hr ageing)

Ks3(Fe(OH)3(s)=Fe(OH)3); Ks4(Fe(OH)3(s)+OH=Fe(OH)4

Fe+++ oth oth/un 20°C var U 1961Lba (11441)1524

						$K(\text{Fe}(\text{OH})_3(\text{s})=\text{Fe}(\text{OH})_3) < -8.7$	
Fe+++	sp	NaClO4	20°C	3.0M	U	1961MNd (11442)1525	$*B(2,2)=-1.17?$ to 1.06?
Fe+++	sp	none	20°C	0.0	U H	1960RSa (11443)1526	$*K1=-2.30$
DH(*K1)=41.4(18-35 C)							
Fe+++	sol	oth/un	20°C	dil	U	1959ASa (11444)1527	$K(\text{Fe}(\text{OH})_3(\text{s})=\text{Fe}(\text{OH})_3)=-5.85$ B3=32.15 Kso=-38
Fe+++	con	NaClO4	25°C	3.0M	U	1959BIa (11445)1528	$*K1=-3.05$ $*B2=-6.31$ $*B(2,2)=-2.96$ $*B(3,4)=-5.77$
Fe+++	sol	oth/un	?	var	U	1959FEb (11446)1529	$K(\text{FeOOH}(\text{s})+\text{H}_2\text{O}=\text{Fe}(\text{OH})_3)=-7$ Kso=-37(amorphous), -42.5(alpha-Fe2O3), -44(alpha-FeOOH)
Fe+++	gl	NaClO4	20°C	1.0M	U	1959PEb (11447)1530	$*K1=-2.74$ $*B2=-6.05$ $*B(2,2)=-2.85$ $*B(2,2): K(2\text{Fe}+2\text{H}_2\text{O}=\text{Fe}_2(\text{OH})_2+2\text{H}); \text{method:also redox}$
Fe+++	EMF	none	25°C	0.0	U	1958LAa (11448)1531	Kso(Fe(OH)3)=-39.43
Fe+++	oth	NaClO4	20°C	3.0M	U	1957BRb (11449)1532	$*B(2,2)=-2.0$ $*K1=-3.0$ and $*K2=-3.3$ assumed. Method: magnetic susceptibility.
Fe+++	gl	NaClO4	25°C	3.0M	U	1957BSa (11450)1533	Kso(Fe(OH)3)=-38.7 $*Kso=3.96$ $*Kso: K(\text{Fe}(\text{OH})_3(\text{s})+3\text{H}=\text{Fe}+3\text{H}_2\text{O}); \text{method:also redox}$
Fe+++	sp	NaClO4	25°C	1.0M	U IH	1957MIa (11451)1534	$*K1=-2.78$ $*B(2,2)=-2.72$ $K(2\text{FeOH}=\text{Fe}_2(\text{OH})_2)=2.85$ $*B(2,2): K(2\text{Fe}+2\text{H}_2\text{O}=\text{Fe}_2(\text{OH})_2+2\text{H}); \text{DH}(*K1)=42.7 \text{ kJ mol}^{-1}, \text{DH}(*B(2,2))=51.0,$ $\text{DH}(\text{Fe}_2(\text{OH})_2)=-34.3, \text{DS}(*K1)=88, \text{DS}(*B(2,2))=117, \text{DS}(\text{Fe}_2(\text{OH})_2)=-59. \text{ Also } I=0$
Fe+++	gl	none	?25	0.0	U	1957MOa (11452)1535	

Kso(Fe(OH)3)=-36.85

Fe+++ sp NaCl04 25°C 0.01M U T 1957TMa (11453)1536

*K1=-2.47

*K1=-2.81(15 C), -2.28(35 C)

Fe+++ sp NaCl04 25°C 0.02M U I 1957TMa (11454)1537

*K1=-2.49

*K1=-2.41(I=0.004), -2.47(I=0.01)

Fe+++ sp NaCl04 15°C 0.50M U T 1956CHb (11455)1538

*K1=-2.93

*K1=-2.49(35 C)

Fe+++ sol none 25°C 0.0 U 1956GWb (11456)1539

K(Fe(OH)3(s)+H)=-2.92

K(Fe(OH)3(s)=Fe(OH)3)=-6.54

Fe+++ oth NaCl04 25°C 3.12M U T H 1955MSa (11457)1540

*B(2,2)=-2.14

*B(2,2): K(2Fe+2H2O=Fe2(OH)2+2H); DH(*B(2,2))=41.0; *B(2,2)=-2.31(15 C)
-1.99(35 C), -1.79(45 C), -1.60(51 C); method:magnetic susceptibility

Fe+++ sp NaCl04 15°C 3.12M U T 1955MSa (11458)1541

*B(2,2)=-2.17

*B(2,2): K(2Fe+2H2O=Fe2(OH)2+2H)=-1.48(51 C)

Fe+++ sp NaCl04 25°C 3.0M U I 1955MVa (11459)1542

*K1=-2.89

*B(2,2)=-2.58

K(2FeOH=Fe2(OH)2)=3.20

*B(2,2): K(2Fe+H2O=Fe2(OH)2+2H). At I=0 *K1=-2.17, *B(2,2)=-2.88,
+K(Fe2(OH)2)=1.46

Fe+++ EMF NaCl04 15°C 0.50M U 1954CTa (11460)1543

*K1=-2.93

Fe+++ gl NaCl04 25°C 3.0M U 1953HEb (11461)1544

*K1=-3.05

*K2=-3.26

*B(2,2)=-2.91

K(2FeOH=Fe2(OH)2)=3.19

*B(2,2): K(2Fe+2H2O=Fe2(OH)2+2H)

Fe+++ con oth/un 25°C dil U 1953IYa (11462)1545

*K1=-2.83

*K2=-4.59

Fe+++ sp KCl 25°C 0.50M U M 1953KTa (11463)1546

K(Fe(CN)5NO+2OH)=6.05

Fe+++	sp	none	25°C	0.0	U		1952Sub (11464)1547
						*K1=-1.3	
Fe+++	sp	NaCl04	25°C	0.50M	U		1952WTa (11465)1548
						*K1=-2.80	
Fe+++	kin	KN03	25°C	0.43M	U		1951BBb (11466)1549
						*K1=-2.58	
Fe+++	EMF	oth/un	20°C	var	U		1951QUa (11467)1550
						Kso(Fe(OH)3)=-37.4	
Fe+++	sp	none	25°C	0.0	U T		1951SVa (11468)1551
						*K1=-2.19	
						*K1=-1.93(35 C)	
Fe+++	EMF	none	18°C	0.0	U		1950AFa (11469)1552
						Kso(Fe(OH)3)=-37.50	
Fe+++	gl	oth/un	20°C	var	U		1949EPa (11470)1553
						Kso=-35.5 (fresh)	
Fe+++	sp	NaCl04	25°C	.046M	U		19490Sa (11471)1554
						*K1=-2.55	
Fe+++	gl	oth/un	16°C	var	U		1945BEa (11472)1555
						Kso(Fe(OH)3)=ca. -37	
Fe+++	gl	none	25°C	0.0	U T H		1944LIa (11473)1556
						*K1=-1.96	
						DH(*K1)=76.1; *K1=-2.18(20 C). Also by kinetics	
Fe+++	sp	none	20°C	0.0	U T H		1942RSa (11474)1557
						DH(*K1)=51.5 kJ mol ⁻¹ , DS=130 J K ⁻¹ mol ⁻¹ ; DH(K1)=-5.0, DS=209; 20-50 C	
Fe+++	gl	none	25°C	0.0	U		1938LJa (11475)1558
						*K1=-2.46	
						*K2=-4.70	
Fe+++	gl	oth/un	25°C	dil	U		1938OKa (11476)1559
						Kso(Fe(OH)3)=-36.35	
Fe+++	EMF	oth/un	25°C	0.40M	U TI		1934BHa (11477)1560
						*K1=-2.74	
						At I=0 corr *K1=-2.22, at 35 C: *K1=-1.92	
Fe+++	gl	oth/un	18°C	var	U		1933KAa (11478)1561
						Kso(Fe(OH)3)=-36.5	
						Redox also used. At I=0 corr Kso=-37.7 to -39.2	

Fe+++ kin none 15°C 0.0 U *K1=-2.20 1928B Va (11479)1562

Fe+++ sp oth/un 15°C var U M 1928CSa (11480)1563
K(Fe(CN)5NO+20H)=3.87

Fe+++ gl oth/un 18°C var U 1925BRa (11481)1564
Kso(Fe(OH)3)=-37.7

Fe+++ oth oth/un 18°C dil U 1908MUa (11482)1565
Kso(Fe(OH)3)=-35.96

method: combination of thermodynamic data

Fe+++ con oth/un 25°C var U 1906BJa (11483)1566
*K1=-2.60

02	L	Oxygen	CAS 7782-44-7	(83)
Dioxygen, also oxide; O-- , and superoxide, O2-				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	kin	NaClO4	25°C	1.0M	C			K(Fe(edta)+O2-)=6.90	1983BMD (12628)	1567

Additional method: spectrophotometry. Ligand: superoxide.
Medium pH 10.4, carbonate buffer.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	kin	alc/w	70°C	93%	U			K(Fe+2H2L)=4.86	1967HSd (12662)	1568

Medium: 93% EtOH

Fe+++ sp NaCl04 22°C var U 1963LRc (12663)1569
 K(Fe(OH)(H2O)5+H)=4.55
 K(Fe(OH)(H2O)4H2L+H)=2.96

Fe+++ sp NaClO4 20°C 0.10M U H 1951EUa (12664)1570
K(Fe+HL)=9.30

$$\Delta H(K) = 7.5 \text{ kJ mol}^{-1}; \Delta S = 205 \text{ J K}^{-1} \text{ mol}^{-1}$$

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++ sp NaCl 25°C 0.15M C 2002AMa (13173)1571

B(FeHP04)=19.89
 B(FeH2P04)=20.71
 B(Fe(P04)2)=35.66
 B(FeH-2(P04)2)=32.16

Medium: 0.15 M NaCl/HCl, pH 1.0-2.2. B(FeH-2(P04)3)=49.35,
 B(Fe2H-2(P04)3)=53.12.

Fe+++ gl NaCl04 10°C 1.00M C 2000Lma (13174)1572
 K(Fe2(OH)2+P)=5.90
 K(Fe2(OH)2+Fe2P)=4.85

P: H3P04+H2P04-

Fe+++ EMF NaCl04 25°C 0 C I 1995CIa (13175)1573
 K(Fe+H3L)=-0.2
 K(Fe+H2L)=4.0
 K(Fe+HL)=10
 K(Fe+H3L+H2L)=4.69

K(Fe+2H2L)=7.43, K(Fe+H2L+HL)=11.84, K(Fe+H3L+2H2L)=8.36, K(Fe+3H2L)=9.82
 At I=3.0 M: K(Fe+H3L=FeH2L+H)=1.52, K(Fe+H3L=FeHL+2H)=2.65 + others

Fe+++ EMF NaCl04 25°C 3.0M C 1992CIa (13176)1574
 K(Fe+H3L)=1.41
 K(Fe+H3L=FeH2L+H)=1.54
 K(Fe+2H3L=FeH4L2+2H)=2.91
 K(Fe+2H3L=FeH2L2+4H)=-0.16

K(3Fe+2H3L=Fe3HL2+5H)7.25, K(3Fe+3H3L=Fe3H2L3+7H)=7.62, K(Fe3HL2+H3L)=2.50,
 K(Fe3H4L3+H2L)=3.69, K(3Fe+3H3L=Fe3H4L3+5H)=9.78

Fe+++ gl NaCl04 25°C 3.0M C I 1992CIa (13177)1575
 *Kso(Fe+H3L=FeL(am)+3H)=2.85
 At I=0: *Kso=4.0, Kso(FeL(am)=Fe+L)=-25.7 by extrapolation using SIT

Fe+++ gl NaNO3 25°C 1.00M C K1=19.50 1988KRb (13178)1576
 K(Fe+HL)=9.30

Fe+++ nmr oth/un 25°C ? U M 1985MGa (13179)1577
 K(Fe(trien)+L)=1.79

Fe+++ sp NaCl04 25°C 2.50M C T H 1985WPa (13180)1578
 K(Fe+H2L)=3.49
 K(FeH2L+H2L)=4.9

Fe+++ gl NaCl04 25°C 3.00M C 1974CIa (13181)1579
 K(Fe+H3L=FeH2L+H)=1.33
 K(2Fe+2H3L=Fe2H3L2+3H)=5.77
 K(3Fe+4H3L=Fe3H6L4+6H)=11.65

Fe+++ ix oth/un ? var U 1974FGf (13182)1580
 K(Fe+HL)=7.80
 K(Fe+2HL)=13.18

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Fe+++      sp  NaCl04  20°C  0.05M  U                      1974FIa (13183)1581
                                   K(Fe(OH)+L)=17.3
                                   K(Fe(OH)L+HL)=6.7
                                   K(Fe+H2O+H2L=FeOHL+3H)=4.33
                                   K(FeOHL+H2L=Fe(OH)HL2+H)=0.45
-----
Fe+++      gl  NaCl04  25°C  0.10M  U                      1974RMc (13184)1582
                                   K1=10.24
                                   Beff(Fe+L+NTA+fulv. acid)=23.3
                                   B(Fe+L+Citrate+fulvic)=22.15
-----
Fe+++      gl  NaCl04  25°C  0.10M  U                      1974RMd (13185)1583
                                   K(Fe+HL)=8.95
                                   K(Fe+FeHL)=6.17
-----
Fe+++      vlt NaCl04  25°C  3.00M  U                      1973SZa (13186)1584
                                   K(Fe+H2L)=3.61
                                   K(Fe+HL)=8.13
-----
Fe+++      sol none   25°C   0.0   U                      1972NRa (13187)1585
Kso=-26.43(strengite,FeP04(H2O)2). Estimated values: -28.7(10 C),-23.3(60 C)
-----
Fe+++      sp  oth/un   ?    var   U                      1966FCa (13188)1586
                                   K(2Fe+HL)=11.14
-----
Fe+++      sp  NaCl04  25°C  0.40M  U                      1963GSb (13189)1587
                                   K(Fe+H2L)=3.45
                                   K(Fe+HL)=8.36
By EMF (redox) 3.49 and 8.23
-----
Fe+++      oth none   25°C   0.0   U                      1961EWa (13190)1588
                                   Kso(FeH2L(OH)2)=-30.02 amorp.
Kso=-34.56 (strengite, FeP04(H2O)2)
-----
Fe+++      sol none   25°C   0.0   U                      1957CJa (13191)1589
                                   Kso(Fe(H2L)(OH)2)=-34
-----
Fe+++      sp  none    ?    0.0   U                      1957DAa (13192)1590
                                   K(Fe+HL)=9.75
-----
Fe+++      vlt oth/un   ?    var   U                      1954Rba (13193)1591
                                   K(Fe+4H2L)=9.15
-----
Fe+++      sol oth/un  18°C   var   U                      1951ZHa (13194)1592
                                   Kso(FeL)=-21.89
-----
Fe+++      sp  NaNO3   30°C  0.67M  U                      1942LKa (13195)1593
                                   K(Fe+HL)=9.35

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P207----          H4L      Pyrophosphate      CAS 2466-09-3 (198)

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Diphosphate; from (HO)2PO.O.PO(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaCl	25°C	0.10M	U				1994ALa (13586)	1594
-------	----	------	------	-------	---	--	--	--	-----------------	------

K(FeA(H2L)=FeA(H2L)OH+H)=-3.6

K(FeA(H2L)OH=FeA(HL)OH+H)=-5.3

FeA=uteroferrin (=Fe(II)Fe(III)-purple acid phosphatase). Also data for L= P04---, phenylphosphate, tripolyphosphate and ATP.

Fe+++	kin	oth/un	25°C	0.0	U				1967SAb (13587)	1595
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K(Fe+H3L)=6.43

K(Fe+H2L)=6.97

B(Fe2L)=23.4

Fe+++	sp	oth/un	20°C	0.0	U				1966ASc (13588)	1596
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K(Fe+H2L)=6.62

K(Fe+H3L)=6.05

K(Fe+2H3L)=11.25

Fe+++	sp	KN03	?	2.0M	U	I			1966VWa (13589)	1597
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K(FeSCN+H4L=FeH2L+SCN+2H)=1.17

K(Fe+H2L)=5.58

K=1.26(I=1.5),1.30(I=1.0); K(Fe+H2L)=5.71(I=1.5),5.81(I=1.0),8.08(I=0 corr)

Fe+++	sp	none	20°C	0.0	U				1965SMj (13590)	1598
-------	----	------	------	-----	---	--	--	--	-----------------	------

K(Fe+2H2L)=12.38

By EMF: K=12.07; by distribution: K=12.74

Fe+++	sol	oth/un	?	var	U				1956YAA (13591)	1599
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K(Fe+2HL)=22.19

Kso(Fe4L3)=-22.55 ?

P3010----- H5L CAS 10380-08-2 (1001)

Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaCl04	20°C	0.10M	U	I			1968ASd (13858)	1600
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K(Fe+H2L)=5.03

K(Fe+2HL)=18.85

At I=0 corr: K(Fe+H2L)=7.03, K(Fe+2HL)=20.63

Fe+++	sp	NaCl04	20°C	0.10M	U	I			1968SAC (13859)	1601
-------	----	--------	------	-------	---	---	--	--	-----------------	------

K(Fe+H3L)=5.04

K(Fe+H2L)=5.10

At I=0 corr: K(Fe+H3L)=6.37, K(Fe+H2L)=7.15

ReO4- HL Perrhenate (2581)

Rhenate(VII), Perrhenate;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      dis oth/un 25°C 0.25M C T                          1984PUa (14099)1602
                                   Kout(Fe(phen)3+L)=2.73
Medium: Na2SO4;also for I=0.75 M K1out=2.56, I=0.5 M Kout=2.62
For I=0.5M,K1out=2.94(20 C), 3.03(15 C), 3.17(10 C); phen=phenantroline
*****
S--        H2L      Sulfide          CAS 7783-06-4 (705)
Sulfide;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  oth/un  ?   dil  U    M                          1956DBb (14375)1603
                                   K(Fe(CN)5NO+L)=5.0
                                   K(Fe(CN)5NOL+L)=0.3
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-----
Fe+++      EMF oth/un  ?   var  U    M                          1928SPa (14376)1604
                                   K(Fe(CN)5NO+L)=ca.14
*****
SCN-       HL      Thiocyanate      CAS 463-56-9 (106)
Thiocyanate;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  KCl      25°C 0.10M C T H                          2002PCb (14954)1605
                                   K(FeP+SCN)=2.07
                                   K(FeA+SCN)=-0.17
Data for 10-35 C. DH(FeP+L)=-30.1 kJ mol-1, DS=-61 J K-1 mol-1. DH(FeA+L)=
-5.9, DS=-23. P is sperm whale myoglobin; A is N-acetyl-microperoxidase
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-----
Fe+++      oth NaCl04 RT 0.20M U          K1=2.74      1995ETa (14955)1606
Method: flow injection analysis with spectrophotometric detection. pH 1.35
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-----
Fe+++      sp  KNO3   18°C 0.20M M I          K1=2.26   B2=3.56   1995ZCa (14956)1607
In 50% propanone/H2O: K1=2.31, K2=1.28
-----

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-----
Fe+++      cal non-aq 25°C 100% U   H   T K1=5.2   B2=9.3   19930Ha (14957)1608
                                   B3=12.5
                                   B4=14.9
                                   B5=16.4
                                   B6=17.1
Medium: N,N-dimethylacetamide, 0.4 M Et4NC104. DH(K1)=1.8 kJ mol-1;
DH(B2)=-0.1; DH(B3)=-5.6; DH(B4)=-14.1; DH(B5)=-23.6; DH(B6)=-36.5
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-----
Fe+++      sp  NaCl04 25°C 1.0M C IH      K1=2.11   B2= 3.34  19920Kb (14958)1609
                                   B3=3.82
By calorimetry: DH(K1)=-6 kJ mol-1; DH(B2)=-12, DH(B3)=-26.
Also data for 1.0 M NH4Cl04 medium.
-----

```

Fe+++ cal oth/un 25°C 0.10M C H 1989HKa (14959)1610
Medium: 0.10 M KSCN. DH(K1)=-4.4 kJ mol⁻¹.

Fe+++ dis KCl 24°C 1.00M U H T K1=1.55 B2=2.50 1985BJa (14960)1611
K3=0.6
K4=-0.4

Fe+++ sp NaClO4 25°C 0.50M C I K1=2.18 1985MEa (14961)1612
*K(Fe(SCN))=-1.20
At I=1.0 M: K1=2.13, *K(Fe(SCN))=-1.21. At I=1.5 M: K1=2.11,
*K(Fe(SCN))=-1.21. Also data to 120 MPa.

Fe+++ sp non-aq 25°C 100% U IH K1=4.07 1985PWa (14962)1613
Medium: dimethylsulphoxide. K1 extrapolated to I = 0.0

Fe+++ nmr NaClO4 25°C 3.0M C K1=2.53 B2= 3.88 1983KNa (14963)1614
K3=1.31
K4=1.33
K5=-0.32

Fe+++ sp NaNO3 20°C 0.20M C K1=2.32 1982DVa (14964)1615

Fe+++ kin NaClO4 25°C 0.13M U I K1=2.4 1978BWa (14965)1616
Medium: 0.1 M HClO4 + 0.005 M Fe(ClO4)3; also data for NaClO4, KClO4, NaNO3,
KNO3, Na2SO4 and K2SO4, I=0.05 - 0.3 M

Fe+++ sp NaClO4 25°C 0.20M C K1=2.177 1976JOa (14966)1617
K(FeOH+SCN)=-2.66

Fe+++ sp alc/w 25°C 0.5M U TI K1=2.53 1976VKd (14967)1618
K1=2.26 (100%H2O)
In I=0.5 M HNO3 in 50% v/v EtOH/H2H;
For I=0.5 M HNO3 in 50% v/v MeOH/H2H K1=2.67

Fe+++ sp oth/un rt 0.50M U K1=2.17 1974CSa (14968)1619

Fe+++ sp KNO3 rt 0.10M U M 1972KAg (14969)1620
K(Fe(NTA)+L)=2.40

Fe+++ sp non-aq 25°C 100% U K1=2.92 B2=4.91 1971WYa (14970)1621
Medium: DMSO, 0.1 M NaClO4

Fe+++ nmr oth/un ? var U K1=2.0 1970LSa (14971)1622
Method: esr

Fe+++ sp NaClO4 25°C 1.0M U T H K1=2.14 1969CEb (14972)1623
Medium: LiClO4; DH(K1)=-13.0 kJ mol⁻¹. K1=2.33 (1.6 C), 2.21 (15.8 C)

Fe+++ sp NaCl ? 0.67M U K1=1.0 1969MMa (14973)1624

Fe+++ sp non-aq 25°C 100% U K1=3.07 1968LCb (14974)1625
Medium: Me2SO, 0.024 M NaNO3

Fe+++ sp NaClO4 20°C 1.20M U K1=2.12 1968MAd (14975)1626

Fe+++ EMF NaClO4 25°C 1.0M U K1=2.10 B2=3.14 1968PCa (14976)1627

Fe+++ sp NaClO4 25°C 3.0M U K1=2.24 1967CSa (14977)1628
Medium: 3 M MgClO4, 1.8 H+. By kinetics: K1=2.26

Fe+++ sp oth/un ? var U M 1967LUd (14978)1629
K(FeA+H+L)=-1.10
H4A=EDTA

Fe+++ EMF oth/un 25°C 0.0 U M 1967NPF (14979)1630
K(Fe(C5H5)2+L)=1.0

Fe+++ sp KNO3 ? 2.0M U I K1=1.96 1966Vva (14980)1631
K1=1.97(I=1.5), 2.00(I=1), 2.08(I=0.5), 2.11(I=0.4), 3.09(I=0 corr).

Fe+++ dis NaClO4 25°C 3.0M U I K1=2.18 B2=3.60 1965MRb (14981)1632
K3=1.40
K4=1.30
K5=-0.7
Kd(FeL4(aq)=FeL4(Et2O))=1.5
Medium: 3 M LiClO4, 0.2 H+; K6=-0.09, B6=6.14; In 3M LiNO3, 0.2 H+: K(M+FeL6)=
-1.1(M=Na+), -0.25(K+), -0.1(Rb+), 0.1(Cs+), -0.1(NH4+)

Fe+++ sp NaClO4 25°C 3.0M U TIH K1=2.19 B2=3.67 1965MRc (14982)1633
K5=0.00
K6=0.035
In LiNO3, I=6.1 M: K1=2.26, B2=3.93; I=1.1: 1.91, 2.99; I=0.1: 2.17, 3.60
I=6.1: DH(K1)=-9.2 kJ mol⁻¹, DS=12 J K⁻¹ mol⁻¹; DH(B2)=24.2, DS=-4

Fe+++ oth NaClO4 25°C 1.40M U K1=2.35 B2=3.90 1964JMc (14983)1634
K3=1.31
K4=0.66
K5=0.21
Method: paper electrophoresis.

Fe+++ sp NaClO4 20°C 0.60M U I K1=2.15 1964KSe (14984)1635
Medium: HClO4. K1=2.20(I=0.3), 2.27(I=0.15)

Fe+++ sp NaNO3 23°C 4.0M U K1=2.1 B2=3.40 1964VMb (14985)1636
K3=0.5
K4=0
K5=K6=0.1
B6=3.7
I=0 corr: K1=3.1, K2=2.2, K3=0.9

Fe+++ sp none 22°C 0.0 U I T K1=3.11 1962VAa (14986)1637
Also K1 for I=0.3 to 5.0 M LiNO3, NaNO3, NaClO4; for I=0.3 to 2.5 M KNO3 and
I=0.5 to 7.7 M Mg(NO3)2

Fe+++ EMF NaClO4 26°C 0.50M U I M K1=2.15 B2=3.27 1961YAa (14987)1638
K(Fe+L+HF=FeLF+H)=3.14

By spectrophotometry K1=2.17(16 C), 2.15(27 C), 2.14(35 C), 2.13(45 C)
DH(K1)=-2.2 kJ mol⁻¹, DS=50 J K⁻¹ mol⁻¹

Fe+++ sp oth/un ? var U K1=2.1 19600Ha (14988)1639

Fe+++ vlt NaClO4 ? 0.50M U K1=1.8 1960TRa (14989)1640

Fe+++ sp mixed 20°C 20% U I K1=2.68 1959BMc (14990)1641
Medium: 20% w/w acetone/H2O, 0.025 M H. K1=2.82(40%), 3.5(80%). With 0.1 M H:
K1=2.43(20%), 2.57(40%), 3.2(80%)

Fe+++ sp NaClO4 25°C 0.40M U H K1=2.16 1958BCb (14991)1642
DH(K1)=-6.7 kJ mol⁻¹.

Fe+++ EMF NaClO4 20°C 0.65M U I K1=2.12 B2=3.1 1958PEc (14992)1643
Medium: HClO4. By spectrophotometry, 0.56 M HClO4: K1=2.16, K2=1.15.
At I=0 corr: K1=3.04, K2=1.60

Fe+++ sp oth/un 20°C 0.08M U I K1=2.44 1957YTa (14993)1644
Medium: Mg(NO3)2 at I=0.08. K1=2.13(I=0.5), 2.03(I=1.0), 1.99(1.5 to 3), 2.07
(I=4.8), 3.1(0 corr); Also K1 for KNO3, Mg(ClO4)2 and Al(NO3)3 media

Fe+++ EMF NaClO4 25°C 0.50M U IH T K1=2.14 B2=3.45 1956LAa (14994)1645
DH(K1)=-6.3 kJ mol⁻¹, DH(K2)=-1.3; data also for 0 corr: K1=3.03, DH(K1)=-6.3
DS=36.4 J K⁻¹ mol⁻¹

Fe+++ sp oth/un 12°C var U K1=2.30 1955ISa (14995)1646

Fe+++ sp NaClO4 25°C 1.20M U T T K1=2.11 B2=3.30 1955LRa (14996)1647
K3=0
*K1(FeL)=-4.2
K1=2.19(5 C), 2.14(15 C), 2.09(35 C), 2.07(45 C). AT I=0 corr: K1=3.03

Fe+++ sp NaClO4 25°C 1.20M U M 1955LRa (14997)1648
B(FeL(SO4))=4.08
B(FeL(SO4)2)=5.69
B(FeLC1)=2.42
B(FeLC12)=2.08
B(FeLBr)=1.32

Fe+++ sp oth/un ? var U K1=2.62 1954JMb (14998)1649

Fe+++ sp NaClO4 25°C 1.28M U H T K1=2.06 B2=3.5 1953BDb (14999)1650
Medium: HClO4. K2 by kinetics. At I=0 corr K1=2.94. DH(K1)=-6.7 kJ mol⁻¹,


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-----
Fe+++      dis NaClO4 18°C 1.80M U   I   T K1=2.09   B2=3.84   1951MMa (15000)1651
              K3 < -0.74
              K4 > 1.80
              K5=-0.70
              K6=-1.03
In 1.8 M KNO3: K1=1.96, K2=2.02, K3=<-0.41, K4=>-0.14, K5=-1.57, K6=-1.51
In 1.0 M KNO3: K1=1.99. Also other media

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Fe+++ sp oth/un rt 0.60M U K1=1.77 1950HMa (15002)1653
Medium: 0.6 M K2SO4

Fe+++ sp NaClO4 rt 0.50M U I K1=2.14 1947FOa (15004)1655
Medium: HClO4. In 0.128 M HClO4 K1=2.37. At I=0 corr K1=2.95

Fe+++ dis oth/un ? ? U 1944MOa (15006)1657
K4=-2.0

Fe+++ sp NaCl04 ? 1.0M U K1=2.10 1941EBa (15008)1659

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*****
S03--          H2L      Sulfite          CAS 7782-99-2  (801)
Sulfite;

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Fe+++ sp NaClO4 10°C 1.00M C 1998LFa (15452)1661
K(Fe2(OH)2+HSO3)=3.37

Fe+++ sp NaCl 25°C 1.0M U T 1972ASa (15454)1663
K(Fe(CN)5NO+Na+L)=-0.35

Fe+++ sp NaCl04 25°C 1.0M U 1971CAb (15455)1664
*K1<=-0.4

 Fe+++ sp oth/un ? 0.40M U M 1956DBb (15456)1665
 K(Fe(CN)5NO+L)1.17

K2?=-0.77 reactants not defined

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

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

Fe+++ gl NaCl04 25°C 3.0M C I K1=1.65 B2= 2.68 2002CTa (16187)1666
 B(FeHL)=2.36
 B(FeH-1L)=-0.49
 B(Fe3H-6L3)=-5.8

At I=0, extrapolation using SIT: K1=3.82, B2=5.75, B(FeHL)=3.68

By spectrophotometry, I=3.0 M: K1=1.55, B2=2.77, B(FeHL)=2.39

 Fe+++ sol none 25°C 0.0 M T H 1996BPc (16188)1667
 Kso(KFe3(SO4)2(OH)6)=-11.0

Method: solubility of jarosite, KFe3(SO4)2(OH)6, at pH 1.5-3.0 (HCl04)
 and 4-35 C. DH(Kso)=-45 kJ mol-1, DS(Kso)=-350 J K-1 mol-1.

 Fe+++ oth none 25°C 0.0 C I K1=4.27 B2= 6.11 1995MYa (16189)1668
 By extrapolation of literature data using Pitzer equations.
 At I=0.72 M, K1=2.58, B2=3.45.

 Fe+++ sp NaCl04 20°C 0.40M U K1=2.29 1988FWa (16190)1669

Fe+++ gl NaNO3 25°C 1.00M C K1=1.53 1988KRb (16191)1670
 B(-4,3,1)=-4.34

B(p,q,r): pH+qM+rL=HpMqLr.

 Fe+++ oth none 0°C 0.0 U K1=4.12 1987BSb (16192)1671
 Calculated values

 Fe+++ sp NaCl04 25°C 5.00M U H K1out=2.32 1977AHa (16193)1672

DH=16.4 kJ mol-1, DS=99 J K-1 mol-1

 Fe+++ sp NaCl04 25°C 2.67M U T K1=1.924 1977SPb (16194)1673
 K1=2.389(55 C), 3.021(80 C)

 Fe+++ gl oth/un 25°C 0.0 U TI K1=4.74 1975NTa (16195)1674
 I=0(corr); K1=5.18(50 C),6.13(100 C),7.38(150 C). At 30 C: K1=3.30(I=0.12),
 2.75(I=0.50), 1.83(I=2.57). 150 C: 4.63(I=0.25), 4.39(I=0.91), 4.15(I=1.82)

 Fe+++ EMF NaCl04 25°C 3.0M U K1=1.93 B2=2.11 1973NPb (16196)1675
 K(Fe+HL)=0.00

 Fe+++ vlt NaCl04 25°C 0.06M U I K1=2.94 1969SGg (16197)1676

Fe+++	EMF	NaClO4	25°C	3.0M	U	T	K1=2.23	B2=3.26	1969ZLa	(16198)1677
							K(Fe2(OH)2+L)=2.51			
							K(Fe2(OH)2+2L)=3.04			

Fe+++ sp NaClO4 20°C 1.20M U K1=2.06 1967MAh (16199)1678
B(FeLBr)=2.50

Fe+++ sp NaClO4 25°C 0.50M U T H K1=2.30 1963Wla (16201)1680
DH(K1)=26 kJ mol⁻¹, DS=163 J K⁻¹ mol⁻¹. K1=1.93(1 C), 2.11(11 C), 2.30(22 C)
Also by redox and kinetics

Fe+++ sp NaClO4 30°C 1.0M U TIH K1=1.93 1960KUa (16203)1682
Medium: HClO4. DH(K1)=17.6 kJ mol⁻¹, DS=133 J K⁻¹ mol⁻¹. At 20 C: K1=1.83,
K1=1.98(I=0.69), 2.12(I=0.4), 2.39(I=0.2), 2.62(I=0.1), 3.85(I=0)

Fe+++ sp KNO3 20°C 0.10M U I K1=2.66 1959BMc (16204)1683
Medium: HNO3. Also data in Me2CO/H2O mixtures

Fe+++ kin mixed 25°C 39% U K1=5.06 1959JTa (16205)1684
Medium: 38.5 mole % H2O2, x units

Medium: Na₂SO₄. At I=0 corr. K₁=4.04, K₂=1.30. Also at I=0.25, 0.75, 1.53

Fe+++	sp	NaCl04	25°C	1.20M	U	M	K1=2.23	B2=4.23	1955LRa	(16207)1686
							K(Fe+HL)=0.78			
							K(Fe+L+HL)=2.58			
							B(FeL(SCN))=4.08			
							B(FeL2(SCN))=5.69			

Fe+++ sp NaCl04 19°C 0.15M U I K1=2.36 1954SYa (16208)1687
At I=0 corr. K1=3.85

Fe+++ ix NaClO4 28°C 1.0M U K1=1.98 B2=2.95 1953WDa (16209)1688
Medium: HClO4. By spec. K1=2.03, K2=0.97

Fe+++ kin NaClO4 18°C .066M U I K1=3.02 1952SYa (16210)1689
At I=0 corr. K1=4.18

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KNO3	20°C	0.10M	C		K1=2.09 B2=3.07 K3=0.62	1997KRa (16844)	1690

Medium: 0.1 M HNO3

Fe+++	sp	KNO3	20°C	0.10M	U		K1=2.09 B2=3.07 K3=0.62	1997KRa (16845)	1691
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Data also for I=0.01 and 1.0

Fe+++	sp	NaClO4	?	0.05M	U		K1=11.98?	1964TVa (16846)	1692
-------	----	--------	---	-------	---	--	-----------	-----------------	------

Medium: HClO4

Fe+++	sp	oth/un	?	var	U		K1=2.55	1959BGg (16847)	1693
-------	----	--------	---	-----	---	--	---------	-----------------	------

Fe+++	sp	oth/un	25°C	0.12M	U		K1=1.98	1957MNa (16848)	1694
-------	----	--------	------	-------	---	--	---------	-----------------	------

Fe+++	sp	KNO3	25°C	0.47M	U	H	K1=2.10 K1=1.59(6.1 C)	1954PAb (16849)	1695
-------	----	------	------	-------	---	---	---------------------------	-----------------	------

DH(K1)=41.0 kJ mol⁻¹, DS=178 J K⁻¹ mol⁻¹. At I=0 corr. 6.1 C
K1=3.25, DH(K1)=37.2, DS=197

Fe+++	sp	oth/un	25°C	var	U		K1=2.65	1948HBa (16850)	1696
-------	----	--------	------	-----	---	--	---------	-----------------	------

Fe+++	EMF	NaNO3	18°C	1.05M	U		K1=1.18	1930SCa (16851)	1697
-------	-----	-------	------	-------	---	--	---------	-----------------	------

SeO3-- H2L Selenite CAS 7783-00-8 (2391)
Selenite;

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

Fe+++	sol	none	23°C	0	M		K1=11.15	1995RFa (17058)	1698
-------	-----	------	------	---	---	--	----------	-----------------	------

Ks(Fe2(SeO3)3.6H2O(s)=2Fe+3SeO3)=-41.58

Fe+++	sp	NaClO4	40°C	1.0M	U	T H	K(Fe+H2L=FeHL+H)=0.61	1965HIb (17059)	1699
-------	----	--------	------	------	---	-----	-----------------------	-----------------	------

Medium: Na,HClO4. K=0.51(20 C), 0.54(25 C), 0.56(30 C). DH=16.7 kJ mol⁻¹

Fe+++	sol	oth/un	20°C	var	U		Kso(Fe2L3)=-30.7	1957CTa (17060)	1700
-------	-----	--------	------	-----	---	--	------------------	-----------------	------

SiO3-- H2L Silicate CAS 7699-41-4 (747)
Silicate; SiO2(OH)2--

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

Fe+++	sol	none	22°C	0.0	C		K(Fe+H3SiO4)=9.8	1979REa (17210)	1701
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Analysis by atomic absorption spectrometry.

Fe+++ sp NaCl04 25°C 0.10M U H 197300b (17211)1702

*K1=-0.6

*DH1=15.8 kJ mol⁻¹, *DS1=41.0. By polarography: *K1=-0.5

Fe+++ sp NaCl04 25°C 0.10M U 1965WSa (17212)1703

K(Fe+H2L=H+FeHL)=-0.24

K(Fe+HL)=9.26

W04-- H2L Tungstate CAS 13783-36-3 (445)

Tungstate;

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

Fe+++ sp NaCl ? 1.00M U M 1973TSa (17439)1704

K(Fe+A)=17.8

K(Fe+Fe(II)A=Fe(II)+FeA)=4.2

K(FeA0H+H)=5.2

K'=1.6

K': 2FeA0(7-) + 2H = (FeA)20(12-) + H2O. A=SiW11039(8-)

CH202 HL Formic acid CAS 64-18-6 (37)

Methanoic acid; H.COOH

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

Fe+++ oth oth/un RT 1.0M C 1982MDc (17606)1705

B6=2.83

Method: paper electrophoresis. Medium: 0.5 M NaNO3/0.5 M formate buffer, pH 3.75.

Fe+++ ix NaCl04 ? 1.00M U K1=1.70 B2=3.70 1973PZa (17607)1706

Fe+++ EMF NaCl04 ? 1.00M U M K1=1.49 B2=3.4 1972PZa (17608)1707

K(3Fe+6L=Fe3(OH)2L6+2H)=13.54

Fe+++ ix oth/un 25°C 1.0M U K1=1.85 B2=3.61 1962TSa (17609)1708

B3=3.95

B4=5.4

Fe+++ EMF NaCl04 20°C 1.0M U K1=3.1 1959PEb (17610)1709

CH4N2O L Urea CAS 57-13-6 (2018)

Carbamide, Urea; (H2N)2CO

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

Fe+++ vlt NaCl04 25°C 0.20M U K1=0.78 B2=1.04 1985MCc (17716)1710

K3=-0.046

K4=0.52
K5=-0.52
K6=-1.0

Fe+++ vlt NaClO4 20°C 0.20M U K1=0.78 B2=1.04 1980Mca (17717)1711
B3=1.00
B4=1.52
B5=0.95
B6=-0.3

Fe+++ sp NaClO4 20°C 1.20M U M K1=0.74 B2=0.98 1970MAe (17718)1712
B3=0.92
B4=0.76
B5=0.44
B6=0.02

B(FeL4(SO4)2)=3.21, B(FeL5(SO4))=1.31

CH4N2S L Thiourea CAS 62-56-6 (51)
Thiocarbamide, Thiourea; (H2N)2CS

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

Fe+++ sp oth/un 20°C 1.20M U B2=8.44 1968MAb (17824)1713

Fe+++ sp oth/un 20°C 1.20M U M 1968MAb (17825)1714
B(FeL(SO4))=6.63

Fe+++ sp NaClO4 20°C 1.20M U M B2=8.4 1968MAb (17826)1715
B(FeLSO4)=6.6
B(Fe(SCN)L)=5.55

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

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

Fe+++ oth non-aq 21°C 100% U M 1980MKa (17879)1716
K(TPPFeCl+4L)=-3.2

Medium: CH2Cl2. TPPFeCl=Tetraphenylporphyrin ferric chloride.

For octaethylporphyrin ferric chloride, K=-2.3

CH5O3P H2L CAS 13590-71-1 (1752)
Methylphosphonic acid; CH3.PO3H2

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

Fe+++ gl KCl 25°C 0.10M U K1=9.05 1986NIa (18128)1717
K(Fe+L=FeL(OH)+H)=5.86
K(Fe+L=FeL(OH)2+2H)=-1.08

CH606P2 H4L Medronic acid CAS 1984-15-2 (2384)
Methanediphosphonic acid; CH2(P03H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	U		K1=19.9 B2=26.6	1967KLa (18282)	1718

C2H02Cl3 HL Trichloroacetic CAS 76-03-9 (1205)
Trichloroethanoic acid; Cl3C.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	100%	U		K1=4.09	1971SSg (18332)	1719

Fe+++	EMF	NaClO4	25°C	3.00M	U		K1=0.85 B2=1.08	1970PTb (18333)	1720
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C2H202Cl2 HL CAS 79-43-6 (1282)
Dichloroethanoic acid; Cl2CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	25°C	1.0M	C		K1=0.73	1978PTa (18394)	1721

Medium: 1.0 M Fe(ClO4)3/HClO4, pH 1.0

Fe+++	sp	alc/w	25°C	100%	U		K1=4.06	1973LRa (18395)	1722
Fe+++	gl	NaClO4	20°C	1.00M	U		K1=1.9 B2=3.7	1969PJc (18396)	1723

C2H203 HL Glyoxylic acid CAS 298-12-4 (1142)
Glyoxylic acid; OHC.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	U		K1=13.9 B2=26.10	1975SDa (18421)	1724

C2H204 H2L Oxalic acid CAS 144-62-7 (24)
Ethanedioic acid; (COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	cal	NaNO3	25°C	0.5M	U		K1=7.53 B2=13.64	2000KPb (18886)	1725

K3=4.85

DH1=+3.43; DH2=-0.1; DH3=-3.07 kJ/mol

Fe+++	gl	non-aq	25°C	100%	C		K1=13.16 B2=23.66	1991Mca (18887)	1726
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B3=30.74

Medium: DMSO, 0.10 M n-Bu4NClO4.

Fe+++	vlt	NaClO4	30°C	1.0M	C		K1=7.75	1988GMb (18888)	1727
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Method: polarography. Medium pH 5.0.

Fe+++	EMF	NaClO4	25°C	2.00M	C	K1=7.58 B3=18.60	B2=13.81	1977DEa (18889)	1728
Fe+++	vlt	NaClO4	25°C	1.00M	U	K1=7.56		1970GMI (18890)	1729
Method : amperometry									
Fe+++	EMF	NaClO4	25°C	0.50M	U	K1=7.53 B3=18.49	B2=13.64	1968DMc (18891)	1730
Method: platinum electrode. Medium: LiClO4									
Fe+++	sp	NaClO4	25°C	1.0M	U I	K1=7.59 K(FeOH+HL)=6.83		1966MSb (18892)	1731
I=3: K1=7.74									
Fe+++	sp	oth/un	25°C	0.50M	U T	K1=7.39 K(Fe+HL)=4.35		1965BSa (18893)	1732
K1=7.75(5 C), 7.70(15 C), K=4.10(5 C), 4.34(15 C)									
Fe+++	ISE	oth/un	25°C	0.0	U	K3=4.27		1965PVa (18894)	1733
Fe+++	ix	oth/un	?	0.50M	U	K1=7.54 B3=20.0	B2=14.59	1963PBb (18895)	1734
Fe+++	dis	NaClO4	20°C	0.10M	U	B3=20.46		1963STc (18896)	1735
Fe+++	gl	KNO3	32°C	1.0M	U	K3=4.77		1957DSa (18897)	1736
Fe+++	sp	oth/un	?	?	U	K1=9.84 K3=3.70	B2=16.04	1956BDb (18898)	1737
Fe+++	oth	oth/un	?	?	U	K1=4.64 B3=19.6		1956VPa (18899)	1738
Fe+++	vlt	NaClO4	25°C	0.50M	U	B3=17.96		1954SLb (18900)	1739
Fe+++	gl	oth/un	?	0.0	U	K1=9.4 K3=4	B2=16.2	1949LAa (18901)	1740
Fe+++	vlt	oth/un	?	?	U	B3=21.6		1941LIa (18902)	1741
Fe+++	vlt	oth/un	?	?	U	B3=23.9		1941TOa (18903)	1742

C2H3N3 HL 1,2,4-Triazole CAS 288-88-0 (381)

1,2,4-Triazole; cyclo(-NH.N:CH.N:CH-) C2H3N3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	alc/w	25°C	80%	U				1994HPa (19234)	1743
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K(PeP(H2O)+HL=FePHL+H2O)=2.9

K(FeP(H2O)+L=FePH-1L)=5.3

Medium: 80% v/v MeOH/H2O. FeP: Fe porphyrin microperoxidase-8.

C2H3O2Br		HL	Bromoacetic acid	CAS 79-08-3	(1309)
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Bromoethanoic acid; Br.CH2.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	alc/w	25°C	100%	U			K1=3.89	1971SSg (19278)	1744
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Medium: EtOH

C2H3O2Cl		HL	Chloroacetic	CAS 79-11-8	(34)
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Chloroethanoic acid; ClCH2.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	EMF	NaClO4	25°C	1.00M	U			K1=1.93	1971NPa (19362)	1745
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B(2Fe+4L=Fe2L4)=8.95

K(Fe+FeOH+4L=Fe2(OH)L4)=6.70

Fe+++	sp	alc/w	25°C	100%	U			K1=3.89	1971SSg (19363)	1746
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Fe+++	EMF	NaClO4	20°C	1.0M	U			K1=2.1	1959PEb (19364)	1747
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C2H3O2F		HL	Fluoroacetic ac	CAS 144-49-0	(4222)
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Fluoroethanoic acid; F.CH2.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	NaClO4	20°C	1.00M	U			K1=2.2 B2=3.4	1970KPc (19402)	1748
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B(3Fe+20H+6L)=9.2

C2H4NF3		L		CAS 753-90-2	(6297)
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Trifluoroethylamine; CF3.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	alc/w	25°C	80%	U	M			1993BHa (19434)	1749
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K(FeP+L)=1.3

Medium: 80%MeOH/H2O. P: porphyrin microperoxidase-8. Also data for

L=NH2CH2CN (1.7), NH2CH2CH2CN (2.9), NH2CH2CH2Br (3.2), benzylamine (4.65).

C2H4NO2Cl		HL		CAS 10335-72-5	(2588)
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N-(Chloroacetyl)hydroxylamine; ClCH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaClO4	25°C	1.00M	U		K1=8.93	1979SRb (19437)	1750
Fe+++	EMF	NaClO4	25°C	1.00M	U		K1=8.93 B2=17.37 K3=7.08	1978SSe (19438)	1751

C2H4N2O4		H2L					CAS 1687-60-1	(2969)	
Oxalldihydroxamic acid; (CO.NH.OH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	oth/un	25°C	0.10M	U		K1=3.44	1957MJa (19447)	1752

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
Fe+++	gl	NaClO4	25°C	3.0M	C	I		2001CTb (19960)	1753
							B*(111)=-1.85; B*(2,2,0)=-2.88 B*(1,2,2)=-3.43; B*(340)=-6.14 B*(363)=-5.66; B*350)=-8.44 B*(3,8,6)=-8.016		
At I=0 (by SIT): B*(1,1,1)=-0.87, B*(1,2,2)=-1.45, B*(3,6,3)=-2.85 B*(pqr):pFe+(q-r)H2O+rHL=Fep(OH)(q-r)Lr									

Fe+++	gl	NaCl	25°C	3.0M	C			1989MDa (19961)	1754
							B(FeH-1L)=0.26		

Fe+++	nmr	oth/un	37°C	1.00M	U		K1=2.6 B(Fe2L2)=9.3 B(Fe3L6)=22.8	1982KYb (19962)	1755

Fe+++	sp	alc/w	25°C	100%	U		K1=4.29	1971SSg (19963)	1756

Fe+++	vlt	KNO3	25°C	1.00M	U		K1=3.2 B2=6.3 B3=8.2	1970SRa (19964)	1757

Fe+++	EMF	NaClO4	25°C	3.00M	U		K1=3.23 B(2Fe+6L=Fe3(OH)2L6+2H)=22.05 B(3Fe+2L=Fe3(OH)3L2+3H)=5.87 B(7Fe+6L=Fe7(OH)9L6+9H)=17.26	1969CNa (19965)	1758

Fe+++	sp	NaClO4	25°C	0.40M	U		K1=2.63	1968DMc (19966)	1759
Medium: LiClO4.									

Fe+++	gl	non-aq	25°C	100%	U			1964KLa (19967)	1760
							K3=6.17		

Medium: ethanoic acid

Fe+++ EMF KCl 25°C 0.50M U B2=10.32 1961NPa (19968)1761
Medium: HCl

Fe+++ gl oth/un 20°C 0.10M U K1=3.38 B2=6.1 1961SPa (19969)1762
B3=8.7
18-22 C. By spectrophotometry:K1=3.2,B2=6.5,B3=8.3. At I=0.01: K2=2.8

Fe+++ EMF NaCl04 20°C 1.0M U K1=3.2 1959PEd (19970)1763

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

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

Fe+++ kin NaCl04 25°C 0.50M C K1=13.49 1983BMc (20320)1764
K(Fe+H2L=FeL+2H)=0.09

Method: spectrophotometry.

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

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

Fe+++ sp none 30°C 0.0 U 1976GCa (20539)1765
K1eff=3.90

Measured at pH 3.0

Fe+++ EMF NaCl04 20°C 1.00M U T K1=2.5 1974KRb (20540)1766
B(Fe3(OH)2L6)=17.4

Fe+++ sp oth/un 25°C 0.10M U B2=7.91 1972NBb (20541)1767
pH 2.5-4

Fe+++ sp oth/un ? 0.10M U K1=4.7 1952BEb (20542)1768

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

Fe+++ gl alc/w 25°C 61% U K1=9.66 1995SDa (21551)1769
Medium: 61.1 wt % EtOH/H2O, I=0.50 M LiCl.

Fe+++ gl NaNO3 25°C 0.50M C K1=8.57 1990DJa (21552)1770
B(FeHL)=11.33
B(Fe2H-2L2)=12.32

Additional method: spectrophotometry.

$$K((\text{WFe3S4A3})2\text{A3}+\text{L}) > 0.60$$

Medium: MeCN. HA=thiophenol

C2H7N L Ethylamine CAS 75-04-7 (156)

Ethylamine; $\text{CH}_3.\text{CH}_2.\text{NH}_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	alc/w	25°C	80%	U	M		1993BHa (22271)	1788
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$$K(\text{FeP}+\text{L})=3.65$$

Medium: 80%MeOH/H₂O. P: porphyrin microperoxidase-8. Also data for L=PrNH₂ (1.5), BuNH₂ (4.4), tert-BuNH₂ (<0.5), MeNH₂ (4.0), DiMeNH₂ (2.7), Me₃N (0).

C2H7O2PS2 HL CAS 5930-72-3 (4229)

O,O-Dimethyldithiophosphoric acid; $(\text{CH}_3)_2\text{P}(\text{SH})_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	EMF	mixed	25°C	90%	U			1984GGa (22543)	1789
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$$\text{B}_3=17.20$$

Medium: 90% 2-propanol/H₂O. Data for other substituted dithiophosphoric acids

C2H8O6P2 H4L CAS 6145-33-1 (3543)

Ethane-1,1-diphosphonic acid; $\text{CH}_3.\text{CH}(\text{PO}_3\text{H}_2)_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	NaClO ₄	25°C	0.5M	C		K ₁ =14.10	1990VKc (23268)	1790
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$$K(\text{Fe}+\text{OH}+\text{L})=21.9$$

$$K(\text{Fe}+2\text{OH}+\text{L})=25.1$$

C2H8O7P2 H4L HEDPA CAS 2809-21-4 (436)

1-Hydroxyethane-1,1-diphosphonic acid; $\text{CH}_3.\text{C}(\text{OH})(\text{PO}_3\text{H}_2)_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	KNO ₃	25°C	0.10M	C			2002GKc (23368)	1791
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$$\text{B}(\text{Fe}_2\text{L}_2)=48.85$$

$$\text{B}(\text{Fe}_2\text{H}-1\text{L}_2)=44.06$$

$$\text{B}(\text{Fe}_2\text{H}-2\text{L}_2)=34.55$$

$$\text{B}(\text{FeH}_3\text{L}_2)=47.52$$

Fe+++	gl	KNO ₃	25°C	0.10M	C		K ₁ =24.2	1998Lda (23369)	1792
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$$\text{B}(\text{FeHL})=27.4$$

$$\text{B}(\text{FeH}-1\text{L})=19.1$$

Fe+++	gl	NaClO ₄	25°C	0.50M	U		K ₁ =14.10	1990VSa (23370)	1793
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$$\text{B}(\text{Fe}(\text{OH})\text{L})=21.9$$

$$\text{B}(\text{Fe}(\text{OH})_2\text{L})=25.1$$

Fe+++	kin	KNO3	30°C	0.10M	U	T		1988RRa (23371)	1794
K(FeL(OH)+H)=9.67									
Fe+++	gl	KCl	25°C	0.10M	U		K1=16.21 B2=25.25	1967KLa (23372)	1795
K(Fe+H-1L)=21.60									
K(2Fe+H-1L)=29.1									

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
Fe+++	gl	KNO3	25°C	0.1M	C		B2=30.96	1985MMa (23454)	1796
K(FeL+H)=3.90									
K(FeL(OH)+H)=10.35									

C2H16N5O4Co		HL					(231)		
Pentaammineoxalatocobalt(III); Co(NH3)5(HC2O4)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	28°C	0.30M	U		K1=3.25	1974NDa (23473)	1797

C3H3O4Br		H2L	Bromomalonic				CAS 600-31-7	(6296)	
2-Bromo-propanedioic acid, Bromomalonic acid; HOOC.CHBr.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaClO4	30°C	0.10M	U		K1=6.35 B2=11.83	1976DGd (23537)	1798
K3=4.50									

C3H4N2		L	Imidazole				CAS 288-32-4	(90)	
1,3-Diazole, imidazole; C3H4N2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	C			2003TPa (23885)	1799
K(FeP+L)=7.5									
Medium: CH2Cl2. P is 2,3,12,13-tetrakis(trifluoromethyl)-5,10,15,20-tetraphenylporphyrin.									
Fe+++	sp	KCl	25°C	0.10M	C	T H		2002PCb (23886)	1800
K(FeP+L)=2.23									
K(FeA+L)=4.16									
Data for 10-35 C. DH(FeP+L)=-16.6 kJ mol ⁻¹ , DS=-13 J K ⁻¹ mol ⁻¹ . DH(FeA+L)=-29.4, DS=-19. P is sperm whale myoglobin; A is N-acetyl-microperoxidase									
Fe+++	sp	alc/w	25°C	80%	U			1994HPa (23887)	1801
K(FeP(H2O)+L=FePL+H2O)=4.38									

$K(\text{FeP}(\text{H}_2\text{O})+\text{H}-1\text{L}=\text{FePH}-1\text{L})=6.75$

Medium: 80% v/v MeOH/H₂O. FeP: Fe porphyrin microperoxidase-8. Also data for L=N-methylimidazole (K=4.55), N-acetylimidazole (3.8), N-Cl-N-MeIm (3.9)

Fe+++ sp NaNO₃ 30°C 0.20M U M 1993BGc (23888)1802
 $K(\text{FeA}2\text{B}+\text{L}=\text{FeABL})=3$ to 3.70
 $K(\text{FeABL}+\text{L}=\text{FeBL}2)=4.48$ to 5.51
 $K(\text{FeABC}+\text{L}=\text{FeBCL})=-0.046$ to 2.9
 $K(\text{FeA}2\text{B}+2\text{L}=\text{FeBL}2)=8.70$ to 8.90

A:H₂O. H₆B:5,10,15,20-Tetrakis(2,6-dimethyl-3-sulfonatophenyl)porphyrin.
 C:OH.

Fe+++ sp non-aq 25°C 100% U M 1991UHa (23889)1803
 $K(\text{FeA}0\text{CH}3+2\text{L}=\text{FeA}(\text{OCH}3)\text{L}2)=3.25$
 $K(\text{FeACl}+2\text{L}=\text{FeAClL}2)=6.02$

Medium: CH₂Cl₂. A=Octaethylporphine

Fe+++ sp non-aq 23°C 100% U M 1991YTa (23890)1804
 $K(\text{FeACl}+2\text{L}=\text{FeAClL}2)=6.24$

Medium: CH₃CN. A=2,7,12,17-Tetraethyl-3,8,13,18-tetramethylporphine
 Data also for other porphines

Fe+++ sp NaNO₃ 25°C 0.10M U M 1982WPa (23891)1805
 $K(\text{FeA}+2\text{L})=5.48$
 $K(2\text{FeA}+4\text{L}=2\text{FeAL}2)=-7.85$

A=Tetrakis(4-N-methylpyridyl)porphyrin

Fe+++ sp non-aq 25°C 100% U T HM 1978PGa (23892)1806
 $K(\text{FeAS}+2\text{L}=\text{FeAL}2+\text{S})=4.80$

Medium(S): DMSO, 0.04 M NaNO₃. A=Tetraphenylporphyrin (TPP) chloride
 DH=-44.8 kJ mol⁻¹. 30 C:K=4.70; 35 C:K=4.52; 40 C:K=4.44

Fe+++ sp non-aq 25°C 100% U HM 1978PGa (23893)1807
 $K(\text{FeAS}+2\text{L}=\text{FeAL}2+\text{S})=4.84$

Medium(S): DMSO, 0.04 M NaNO₃. A=Protoporphyrin IX (hemin)-chloride
 DH=-33.0 kJ mol⁻¹. 30 C:K=4.77; 35 C:K=4.69; 40 C:K=4.56

Fe+++ nmr non-aq 20°C 100% U M 1978WYa (23894)1808
 $K(\text{FeA}+2\text{L})=4.8$

Medium: DMSO-d₆. A=Protoporphyrin-IX-chloride

Fe+++ sp non-aq 30°C 100% U H B₂=5.89 1974ARb (23895)1809
 Medium: CH₂Cl₂. DH(B₂)=-92.0 kJ mol⁻¹ and DS(B₂)=-192.0 J mol⁻¹ K⁻¹.

Fe+++ sp oth/un 25°C 0.0 U HM 1964GHF (23896)1810
 $K(\text{FeA}+\text{L})=2.20$
 $K'(\text{FeA}(\text{H}-1\text{L})+\text{H})=10.34$

Medium:0 corr. DH(K)₁=-17.1 kJ mol⁻¹, DS=-17 J K⁻¹ mol⁻¹. DH(K')=-46,
 DS=38. FeA+=ferrimyoglobin

C3H4O3 HL Pyruvic acid CAS 127-17-3 (1152)
 2-Oxopropanoic acid; CH3.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	vlt	NaClO4	30°C	1.0M	C		K1=4.83 B2= 5.52 B(Fe(ox)L2)=8.86 B(Fe(ox)2L)=9.17 B(Fe(cit)L2)=7.01	1988GMb (24051)	1811

Method: polarography. Medium pH 5.0.

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
Fe+++	sp	NaClO4	20°C	0.10M	U		K(Fe(OH)+L)=9.44	1999PKb (24445)	1812
Fe+++	sp	NaClO4	20°C	0.10M	U	M	K(FeOH+L)=9.44	1999PKb (24446)	1813
Fe+++	gl	NaNO3	25°C	0.50M	C		K1=7.52 B2=13.29 B3=16.93	1989SRb (24447)	1814
Fe+++	kin	NaClO4	25°C	0.50M	C		K1=7.57	1977CCb (24448)	1815
Fe+++	EMF	NaClO4	25°C	2.00M	C		K1=7.50 B2=13.04 B3=16.6	1977DEa (24449)	1816
Fe+++	gl	NaClO4	30°C	0.10M	U		K1=6.39 B2=12.36 K3=5.70	1976DGd (24450)	1817
Fe+++	gl	NaClO4	25°C	0.10M	U		K1=8.04 B2=13.54	1973RMb (24451)	1818
Fe+++	kin	NaClO4	25°C	0.50M	U		K1=7.57	1971CDa (24452)	1819
Fe+++	vlt	NaClO4	25°C	1.00M	U		K1=6.54 K(Fe+HL)=2.80	1971GMc (24453)	1820

Method: amperometric titration

Fe+++	sp	oth/un	?	?	U		K1=8.25 B2=13.83	1969GSd (24454)	1821
Fe+++	EMF	NaClO4	25°C	0.50M	U		K1=7.46	1968DMc (24455)	1822
Medium: LiClO4									
Fe+++	vlt	NaClO4	25°C	0.50M	U		B3=15.65	1954SLb (24456)	1823
Fe+++	vlt	oth/un	?	0.02M	U			1951SCa (24457)	1824

B3=15.7

C3H6N2O4 H2L CAS 1882-99-1 (8457)
Molonodihydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	1.0M	C	T		1994BBd (24826)	1825

$K(\text{Fe}+\text{H2L}=\text{FeL}+2\text{H})=-0.02$

At 35 C, from kinetic data, $K=-0.15$. Also data for 40 and 45 C.

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
Fe+++	sp	alc/w	25°C	100%	U		$K1=4.22$	1971SSg (25004)	1826

Fe+++	EMF	NaClO4	20°C	1.0M	U		$K1=3.45$	1959PEa (25005)	1827
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C3H6O2S H2L Thiolactic acid CAS 79-42-5 (366)
2-Mercaptopropanoic acid; CH3.CH(SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	kin	NaClO4	25°C	0.50M	C		$K1=13.43$	1983BMc (25143)	1828

$K(\text{Fe}+\text{H2L}=\text{FeL}+2\text{H})=-0.16$

Method: spectrophotometry.

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
Fe+++	sp	none	30°C	0.0	U			1976GCa (25442)	1829

$K1\text{eff}=3.89$

Measured at pH 3.0

Fe+++	sp	oth/un	?	?	U	M	$K1=3.6$	1970PKc (25443)	1830
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$K(\text{Fe}+2\text{L}+20\text{H}=\text{FeH}-2\text{L2})=26.92$
 $K(\text{Fe}+\text{A}+\text{H}-1\text{L})=25.4$

H3A=5-Sulfosalicylic acid

Fe+++	sp	oth/un	?	->0	U		$K1=6.4$	1952BEb (25444)	1831
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C3H7NO L DMF CAS 68-12-2 (598)
N,N-Dimethylformamide; HCO.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++ nmr non-aq 25°C 100% U 1989SKb (25657)1832

K(FeL5+L)=3.22
K(FeL4+2L)=6.30
K(FeL3+3L)=9.7

Medium: acetonitrile

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

Fe+++ sp alc/w 25°C 80% U M 1993BHa (26174)1833
K(FeP+L)=2.89

Medium: 80%MeOH/H2O. P: porphyrin microperoxidase-8. Also data for L=Gly
(3.46), Val (3.73), Leu (3.99), Phe (4.76), Trp (5.64).

Fe+++ gl NaNO3 25°C 0.50M C K1=8.80 1993DJa (26175)1834
B(FeHL)=11.03
B(FeH-1L)=6.63

Fe+++ vlt KCl 30°C 1.0M U K1=10.98 1967KMc (26176)1835

Fe+++ EMF NaCl04 20°C 1.0M U K1=10.4 1958PEd (26177)1836

C3H7NO2 HL Sarcosine CAS 107-97-1 (87)
N-Methyl-2-aminoethanoic acid; CH3.NH.CH2.COOH

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

Fe+++ EMF NaCl04 20°C 1.0M U K1=9.7 1959PEc (26602)1837

C3H7NO2 HL (6927)
N-Methylacetohydroxamic acid; CH3.CO.N(OH)CH3

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

Fe+++ gl KCl 25°C 0.20M C K1=11.85 B2=21.58 1998FKa (26622)1838
B3=29.36
K(Fe+HL=FeL+H)=3.15

Fe+++ sp NaCl04 25°C 2.00M C K1=11.70 B2=21.50 1994CCb (26623)1839
B3=29.44
K(Fe+HL=FeL+H)=2.75
K(FeL+HL=FeL2+H)=0.9
K(FeL2+HL=FeL3+H)=-1.06

C3H7NO2 HL (7502)
Propanohydroxamic acid; C2H5CONHOH

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.1M	C		K1=16.09 B2=23 B(FeHL)=17.63 K(FeL(OH)2+2H)=1.40	1985MMa (27404)	1849

C3H8N06P H3L Phosphoserine CAS 17885-08-4 (1865)
Serine dihydrogenphosphate, O-Phosphoserine; NH2.CH(CH2.OP03H2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	U		K1=10.90	1997ZTa (27466)	1850
Fe+++	gl	KCl	25°C	0.16M	U		K1=14.0 B2=21.40 K(Fe+HL)=6.7	19590Sa (27467)	1851

Fe+++	gl	oth/un	25°C	0.15M	U		K1=>13	19570Sa (27468)	1852
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C3H8N20 L Dimethylurea CAS 96-31-1 (2021)
1,3-Dimethylurea; CH3.NH.CO.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	vlt	NaCl04	25°C	0.20M	U		K1=-0.046 B2=0.18 K3=1.30 K4=-0.22	1985MCc (27476)	1853

Fe+++	vlt	NaCl04	20°C	0.20M	U		K1=-0.05 B2=0.2 B3=1.49 B4=1.30	1980Mca (27477)	1854
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C3H8N20 L Ethylurea CAS 625-52-5 (2020)
N-Ethylurea; H2N.CO.NH.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	vlt	NaCl04	25°C	0.20M	U		K1=0.079 B2=0.36 K3=-0.046 K4=0.0 K5=0.95 K6=0.15	1985MCc (27484)	1855

Fe+++	vlt	NaCl04	20°C	0.20M	U		K1=0.1 B2=0.4 B3=0.3 B4=0.3 B5=1.3 B6=1.4	1980Mca (27485)	1856
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C3H8N202 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
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Fe+++	sp	NaCl04	25°C	0.10M	U				19940Ia (27577)	1857
									K(Fe+H ₂ L=FeHL+H)=1.44	

Fe+++	gl	KCl	25°C	0.20M	C			K1=13.92 B2=21.99	1989FSa (27578)	1858
									B(FeHL)=17.15	
									B(FeHL2)=28.36	
									B(FeH-1L2)=14.54	
									B(FeHL3)=33.90	

C3H8N2O2 HL (6666)

beta-Alaninehydroxamic acid; NH₂.CH₂.CH₂.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.20M	C			K1=16.99	1995FKa (27607)	1859
									B(FeHL)=19.95	
									B(FeH ₂ L2)=38.30	
									B(FeH-1L2)=22.11	
									B(FeH-2L2)=12.12	

B(FeH₃L3)=55.47, B(FeH₂L3)=50.24, B(FeHL3)=42.75.

C3H8N2O3 H2L CAS 55779-32-3 (5500)

Serinehydroxamic acid, 2-Amino-N,3-dihydroxypropionamide; HO.CH₂.CH(NH₂).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.50M	C			B2=22.15	1994LEa (27618)	1860
									B(FeHL)=17.07	
									B3=28.06	
									B(FeH ₂ L2)=32.88	
									B(FeHL2)=28.80	

B(FeH₂L3)=41.17; B(FeH₃L3)=46.26; B(FeHL3)=34.83; B(FeH-2L2)=22.15

Fe+++	gl	NaCl	25°C	0.20M	U	I		K1=11.72 B2=20.73	1994SKb (27619)	1861
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Also data for 43% v/v MeOH/H₂O, 52% v/v EtOH/H₂O, 59% v/v i-PrOH/H₂O, 61% v/v dioxane/H₂O.

Fe+++	sp	NaCl	25°C	0.15M	C			B2=20.75	1988HMa (27620)	1862
									B(FeHL)=16.26	
									B(FeH ₂ L2)=31.43	
									B(FeH ₃ L3)=44.62	
									B(FeH-1L)=8.06	

C3H8N4O2 L CAS 13547-17-6 (5677)

Methylenedicarbamide; NH₂.CO.NHCH₂NH.CO.NH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaClO4	20°C	0.10M	U		K1=7.7	1984BNa (27641)	1863

C3H8O5S2		H2L		BAL			CAS 59-52-9	(379)	
2,3-Dimercaptopropan-1-ol; HS.CH2.CH(SH).CH2(OH)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	25°C	0.10M	U			1960LMb (27658)	1864
							B(FeL(OH))=30.6		
							B(FeL(OH)(NH3)3)=31.8		

C3H9N3O2		HL					CAS 471915-95-4	(8549)	
2,3-Diamino-N-hydroxypropanamide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.20M	C		K1=16.41	2002ECa (27984)	1865

C3H11N06P2		H4L					(6772)		
(Dimethylamino)-N-methylenediphosphonic acid; (CH3)2N.CH(PO3H2)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaNO3	24°C	0.20M	C		K1=28.8 B2=34.3	1993BRa (28410)	1866
							K(FeL+H)=6.5		
							K(FeHL+H)=1.4		
							K(FeL2+H)=10.3		
							K(FeHL2+H)=9.6		
K(FeH2L2+H)=5.5, K(FeH3L2+H)=3.9, K(FeH4L2+H)=1.6, K(FeH5L2+H)=1.5									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		K1=21.1	1998LDa (28565)	1867
							B(FeHL)=28.1		
							B(FeH2L)=33.1		

Fe+++	EMF	NaClO4	25°C	1.0M	U		K1=27.6	1987PLa (28566)	1868

Fe+++	gl	R4N.X	20°C	0.1M	C		K1=14.6	1967HEa (28567)	1869
							K(Fe+HL)=9.9		
							K(Fe+H2L)=6.0		

C4H2N2S2		H2L					CAS 104409-71-4	(569)	
1,2-Dicyano-1,2-dimercaptoethylene, Dimercaptomaleonitrile; (NC.C(SH):)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	U	M		1972YSb (28618)	1870
							K(FeL2+A)=5.58 K(FeL2+py)=3.72 K(FeL2+B)=2.75 K(FeL2+C)=2.98		

A=triphenylarsine oxide; B=triphenylphosphine oxide; C=triphenylphosphine

 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
Fe+++	sp	NaClO4	23°C	1.00M	U	M		1991SJa (28648)	1871
							K(Fe+HL=FeL+H)=1.33 K(Fe2(OH)2+HL=Fe2(OH)2L+H)=2.4		

Medium: LiClO4

Fe+++	sp	NaClO4	25°C	0.50M	U	T	K1=4.61	1969TWa (28649)	1872
							K1(40 C)=4.49		

C4H3N3O							L (5683)		
							Methylisinosomalonodinitrile; CH3ON:C(CN)2		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	oth/un	25°C	0.25M	U			1985R0a (28703)	1873
							K(Fe(OH)2+L)=3.07 K(Fe(OH)2+2L)=5.92		

Medium: Na-acetate

 C4H4N2 L Pyridazine CAS 289-80-5 (1484)
 1,2-Diazine, Pyridazine; cyclo(-N:N.CH:CH.CH:CH-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	80%	U			1993HPa (28773)	1874
							K(FeP+L)=2.25		

Medium: 80%MeOH/H2O, pH=7.0. P: porphyrin microperoxidase-8.

 C4H4N2 L Pyrimidine CAS 289-95-2 (4247)
 1,3-Diazine, pyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	80%	U			1993HPa (28777)	1875
							K(FeP+L)=1.3		

Medium: 80%MeOH/H2O, pH=7.0. P: porphyrin microperoxidase-8.

C4H4N2 L Pyrazine CAS 290-37-9 (620)
1,4-Diazine, Pyrazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	alc/w	25°C	80%	U				1993HPa (28793)	1876
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K(FeP+L)=1.1

Medium: 80%MeOH/H2O, pH=7.0. P: porphyrin microperoxidase-8.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	NaCl	25°C	0.1M	U			K1=3.89	2000KSb (28912)	1877
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C4H5N3O2 HL 6-Aminouracil CAS 873-83-6 (6213)
4-Amino-2,6-dihydroxypyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	NaClO4	30°C	0.10M	U			K1=18.81 B2=34.72	1986JDa (29423)	1878
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C4H5N5O3 H2L (4262)
4-Hydroxy-6-(hydroxyimino)dihydro-2-triazine carboxaldoxime

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaClO4	20°C	0.02M	U			K1=19	1972GNa (29430)	1879
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K(Fe+HL)=10.05

C4H6N2 L 2-Me-Imidazole CAS 693-98-1 (122)
2-Methyl-1,3-diazole; C3H3N2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	kin	non-aq	25°C	100%	U	M			1993WSa (29485)	1880
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K(FeACl+L)=1.26

K(FeBCl+L)=1.40

K(FeCCl+L)=0.30

K(FeDCl+L)=0.32

H2A=8,13-Divinyl-3,7,12,17-tetramethyl-21H,23H-porphine-2,18-dipropanoic ac.
B=dimethyl ester of A, H2C=dibutanoic acid deriv of A, D=dimethyl ester of C

Fe+++	sp	oth/un	24°C	?	U	M			1991HSa (29486)	1881
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K(FeAClO4+L=FeAL+ClO4)=2.79

K(FeAL+L=FeAL2)=4.32

A=Tetrakis(2,6-dichlorophenyl)porphyrin

Fe+++	sp	non-aq	25°C	100%	U	M			1991UHa (29487)	1882
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$K(\text{FeA}(\text{OCH}_3)+\text{L}=\text{FeA}(\text{OCH}_3)\text{L})=0.96$

Medium: CH_2Cl_2 . A=Octaethylporphine. With 2-benzylimidazole $K=1.66$,
 2-phenylimidazole $K=1.97$, 2-ethylimidazole $K=0.94$

 $\text{C}_4\text{H}_6\text{N}_2$ L 4-Me-Imidazole CAS 822-36-6 (353)
 4-Methyl-1,3-diazole; $\text{C}_3\text{H}_3\text{N}_2.\text{CH}_3$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	U	M		$K(\text{FeA}(\text{OCH}_3)+2\text{L}=\text{FeA}(\text{OCH}_3)\text{L}_2)=3.10$ $K(\text{FeA}(\text{Cl})+2\text{L}=\text{FeA}(\text{Cl})\text{L}_2)=5.85$	1991UHa (29528)	1883

Medium: CH_2Cl_2 . A=Octaethylporphine

Fe+++	sp	non-aq	25°C	100%	U	M		$K(\text{FeAL}+\text{L})=1.69$	1982QNa (29529)	1884
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Medium: THF. A=Tetraphenyl porphyrin. In toluene: $K(\text{FeALSbF}_6+\text{L}) > 7$

$\text{C}_4\text{H}_6\text{N}_2$ L N-Me-Imidazole CAS 616-47-7 (354)
 N-Methyl-1,3-diazole; $\text{C}_3\text{H}_3\text{N}_2.\text{CH}_3$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	C	M		$K(\text{Fe}(\text{P})\text{Cl}+2\text{L}=\text{Fe}(\text{P})\text{L}_2)=3.52$	1998KWb (29593)	1885

P=(o-F)(p-OCH₃)₃-tetraphenylporphyrin; medium: chloroform. In DMF (by
 voltammetry) $K=6.3$. Data for other o-X, o-CF₃ and 2,6-X-substituted TPP.

Fe+++	EMF	KCl	25°C	1.00M	U			$K_2=2.92$	1995NTa (29594)	1886
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Fe+++	sp	oth/un	24°C	?	U	M		$K(\text{FeA}(\text{ClO}_4)+\text{L}=\text{FeAL}+\text{ClO}_4)=1$ $K(\text{FeAL}+\text{L}=\text{FeAL}_2)=4.146$	1991HSa (29595)	1887
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A=Tetrakis(2,6-dichlorophenyl)porphyrin. With N-vinylimidazole, $K=3.88$, 3.54
 respectively

Fe+++	sp	non-aq	25°C	100%	U	M		$K(\text{FeA}(\text{OCH}_3)+2\text{L}=\text{FeA}(\text{OCH}_3)\text{L}_2)=0.83$	1991UHa (29596)	1888
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Medium: CH_2Cl_2 . A=Octaethylporphine

Fe+++	sp	non-aq	23°C	100%	U	M		$K(\text{FeA}(\text{Cl})+2\text{L}=\text{FeA}(\text{Cl})\text{L}_2)=3.25$	1991YTa (29597)	1889
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Medium: CH_3CN . A=2,3,7,8,12,17,18-Heptaethyl-13-trifluoromethylporphine
 Data also for other porphines

Fe+++	sp	non-aq	25°C	100%	U	T HM		$K(\text{FeAS}+2\text{L}=\text{FeAL}_2+\text{S})=4.11$	1978PGa (29598)	1890
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Medium(S): DMSO, 0.04 M NaNO₃. A=Tetraphenylporphyrin (TPP) chloride
 DH=-42.8 kJ mol⁻¹. 30 C:K=3.88; 35 C:K=3.88; 40 C:K=3.74

Fe+++ sp non-aq 25°C 100% U HM 1978PGa (29599)1891

K(FeAS+2L=FeAL2+S)=4.39

Medium(S): DMSO, 0.04 M NaNO3. A=Protoporphyrin IX (hemin)-chloride

DH=-38.0 kJ mol⁻¹. 30 C:K=4.30; 35 C:K=4.18; 40 C:K=4.06

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

Fe+++ gl NaClO4 25°C 0.10M U K1=7.89 B2=13.34 1973RMb (29973)1892

Fe+++ sp R4N.X 25°C 0.50M U K1=6.88 1968DMc (29974)1893

Medium: LiClO4

Fe+++ sp oth/un ? ? U K1=7.49 1956PGa (29975)1894

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

Fe+++ kin NaClO4 25°C 0.50M C K1=7.56 1977CCb (30123)1895

Fe+++ gl NaClO4 30°C 0.10M U K1=7.15 B2=14.13 1976DGd (30124)1896
K3=5.96

Fe+++ kin NaClO4 25°C 0.50M U K1=7.56 1971CDa (30125)1897

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

Fe+++ gl NaClO4 25°C 0.10M U 1970PPa (30217)1898

K(Fe+HL)=3.63

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

Fe+++ kin NaClO4 25°C 0.50M C K1=12.62 1983BMc (30331)1899

K(Fe+H2L=FeL+2H)=0.36

Method: spectrophotometry.

Fe+++ gl KNO3 37°C 0.15M M T K1=9.01 B2=12.52 1979ZJa (30332)1900

At 20 C, 0.15 M KNO3, K1=9.18, B2=11.98.

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
Fe+++	gl	NaNO3	25°C	0.50M	M	M		1989MAa (30628)1901		
B(-3,1,1)=-1.5 K(2FeH-2L=Fe2H-4L2)=-13.0 B(p,q,r): pH+qM+rH2L. K(UO2+Fe+H2L=UO2FeH-2L2+6H)=-7.37										
Fe+++	sp	oth/un	?	?	U			K1=10.45	1972GTc (30629)1902	
Fe+++	gl	NaClO4	20°C	0.10M	U			K1=7.1 B(Fe2H-2L2)=12.85 B(Fe2H-2L3)=17.85 B(Fe3H-4L5)=25.97	1964TIb (30630)1903	

By spectrophotometry: K1=7.09

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
Fe+++	gl	NaClO4	25°C	0.50M	U			K1=5.04	1972NAd (30875)1904	

C4H6O6			H2L						D-Tartaric acid CAS 147-71-7 (93)	
D-Tartaric acid, D-2,3-Dihydroxybutanedioic acid; <chem>HOOC.CH(OH).CH(OH).COOH</chem>										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	nmr	none	25°C		U	M		1990GKc (30975)1905		
K(Fe+H2L=FeHL+H)=1.04										

C4H6O6			H2L						DL-Tartaric acid CAS 133-37-9 (94)	
DL-Tartaric acid,DL-2,3-Dihydroxybutanedioic acid; <chem>HOOC.CH(OH).CH(OH).COOH</chem>										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaNO3	25°C	0.50M	M	M		1989MAa (31019)1906		
K(2FeL=Fe2L2)=-10.9										
Fe+++	gl	NaNO3	25°C	0.50M	U			K1=6.23 B(Fe3H-6L3)=9.25 B(Fe2H-3L2)=8.75	1987SRa (31020)1907	
Fe+++	sp	NaCl	25°C	1.00M	U			K(Fe+3H-1L)=36.7	1982KIa (31021)1908	
Fe+++	sp	NaClO4	25°C	1.00M	U			K1=5.45 K(Fe+HL)=2.10	1974KPb (31022)1909	

Fe+++ gl NaClO4 25°C 0.10M U K1=5.68 B2=10.53 1974RMc (31023)1910
 Beff(Fe+L+fulvic acid)=12.74
 K(Fe(fulvic acid)+L)=7.36
 K(FeL+fulvic acid)=7.06

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
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Fe+++	nmr	none	25°C		U	M		1990GKc (31243)	1911
								K(Fe+H2L=FeHL+H)=1.06	

Data for d,l-Tartaric acid

Fe+++	sp	NaCl	25°C	1.00M	U			1983KIa (31244)	1912
								K(Fe+2H-1L)=39.6	

Fe+++	sp	NaClO4	20°C	1.0M	C	TI		1980MBb (31245)	1913
								K(Fe+H2L=FeL+2H)=-0.68	

At 8C, K(Fe+H2L=FeL+2H)=-0.74. Also data for MeOH/H2O and n-PrOH/H2O mixtures.

Fe+++	gl	NaClO4	25°C	1.00M	C		K1=5.73	1974BVb (31246)	1914
							B(Fe2H-2L2)=10.9		
							B(Fe2H-4L2)=6.0		

Fe+++	gl	NaClO4	25°C	0.10M	U		K1=5.68 B2=10.53	1973Rmb (31247)	1915
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Fe+++	gl	NaClO4	25°C	0.10M	U		K1=6.66 B2=12.30	1973Rmb (31248)	1916
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meso-tartaric acid

Fe+++	sp	oth/un	?		?	U	K1=9.02	1972GTc (31249)	1917
							K(Fe+H-2L)=28.69		

Fe+++	gl	NaClO4	25°C	0.10M	U		K1=5.68 B2=10.53	1972Rma (31250)	1918
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Values quoted for meso form. K1(dl)=6.66, K2(dl)=5.64, B2(meso-dl)=13.46

Fe+++	sp	oth/un	25°C	1.0M	U			1967NAb (31251)	1919
							K(Fe+H2L=FeL+2H)=-0.66 ?		

Fe+++	gl	NaClO4	20°C	0.10M	U		K1=6.49	1964TIa (31252)	1920
							K(2Fe+2L=Fe2(H-1L)2+2H)=11.87		
							K(3Fe+3L=Fe3(H-2L)3+6H)=9.48		

K(2Fe+2L=Fe2(H-1L)(H-2L)+3H)=9.05

Fe+++	dis	NaClO4	20°C	0.10M	U		B2=11.86	1963STc (31253)	1921
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Fe+++	sp	oth/un	?		?	U	K1=7.49	1956PGa (31254)	1922
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Fe+++	vlt	oth/un	?		?	U	K1=18.06?	1945TOa (31255)	1923
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K3=15.29?

C4H6O6 H2L meso-Tartaric CAS 147-73-9 (91)
meso-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaClO4	25°C	0.10M	U		K1=6.66 B2=12.30 Beff(Fe+L+fulvic acid)=13.83 K(Fe(fulvic acid)+L)=8.45 K(FeL+fulvic acid)=7.17	1974RMc (31428)	1924

C4H7NO2 HL Acetoacetamide CAS 2044-64-6 (1407)
3-Oxobutanamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.5M	C		K1=12.03	1998HCb (31447)	1925

C4H7NO2 HL CAS 5687-86-5 (8042)
Cyclopropanecarbohydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaNO3	25°C	0.10M	C		B3=34.80	1996Nwa (31459)	1926

C4H7NO3 L CAS 7340-09-2 (7021)
O-Acetyacetohydroxamic acid; CH3.CO.NHOCOCH3;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaClO4	25°C	1.00M	U		K1=6.86	1979SRb (31512)	1927

C4H7NO3 HL CAS 80393-54-0 (2589)
O-Acetylacethydroxylamine; CH3.CO.CH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaClO4	25°C	1.00M	U		K1=6.86 B2=13.34 K3=6.33	1978SSe (31514)	1928

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
Fe+++	EMF	NaClO4	20°C	1.0M	U		K1=11.4	1958PEd (31856)	1929

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
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Fe+++	EMF	NaCl04	20°C	1.00M	C		K1=10.95	2000BMa (32253)	1930
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Method: Pt/Fe+++ / Fe++ and glass electrodes.

Fe+++	gl	KNO3	25°C	0.5M	C		K1=10.90 B2=19.33	1999SEb (32254)	1931
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B(FeH-1L)=7.73
B(FeH-2L)=4.38
B(Fe2L2)=22.4
B(Fe2H-2L2)=16.90

B(FeHL2)=22.33

Fe+++	sp	oth/un	25°C	0.10M	U		K1=10.72	1997Ysa (32255)	1932
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Fe+++	vlt	KCl	25°C	0.20M	C		B2=19.77	1989MAb (32256)	1933
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Method: cyclic voltammetry at Pt electrode.

Fe+++	gl	NaCl04	25°C	1.00M	U		K1=11.13	1986ANb (32257)	1934
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B(FeHL)=12.02
B(FeH-1L)=8.01

Fe+++	sp	NaCl04	25°C	0.50M	U		K1=10.72	1972NAd (32258)	1935
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C4H8N2O3 HL Asparagine CAS 70-47-3 (17)
2-Aminobutanedioic acid 4-amide; H2N.CH(CH₂.CO.NH₂).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	EMF	NaCl04	20°C	1.0M	U		K1=8.6	1958PEd (32698)	1936
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C4H8N2O3 HL Gly-Gly CAS 556-50-3 (54)
Glycyl-glycine; H2N.CH₂.CO.NH.CH₂.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	EMF	NaCl04	20°C	1.0M	U		K1=9.1	1958PEd (33024)	1937
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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
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Fe+++	sp	NaCl	25°C	0.15M	C		K1=21.06 B2=37.93	2002SMb (33133)	1938
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B(FeHL)=22.42
B(FeH2L2)=42.03
B(FeH-1L2)=34.88
B(FeH-2L3)=45.36

Fe+++ gl KCl 25°C 0.20M C 1993FBa (33134)1939

B(FeHL)=18.82
B(Fe2HL)=31.63
B(Fe2L)=24.25
B(Fe2H-1L)=15.32

B(Fe2H2L)=36.35.

Fe+++ gl KCl 25°C 0.20M C B2=24.25 1990FBa (33135)1940

B(FeHL)=18.82
B(FeH2L2)=36.35
B(FeHL2)=31.63
B(FeH-1L2)=15.32

C4H8N2O4 H2L CAS 36244-81-2 (4267)

N-Carboxymethyliminoacethydroxamic acid; HOOC.CH2.NH.CH2.CO.NH.OH

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

Fe+++ sp NaCl04 20°C 0.10M U K1=16.05 1981KPa (33142)1941

K(Fe+HL)=8.80

Fe+++ sp NaCl04 20°C 0.10M U K1=15.26 1972KMb (33143)1942

K(Fe+HL)=10.62
K(FeL+H2O=FeLOH+H)=-4.22
K(FeL(OH)3+2H=FeLOH+2H2O)=11.1

C4H8N2O4 H2L CAS 5615-93-0 (8458)

Succinodihydroxamic acid;

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

Fe+++ gl KNO3 25°C 1.0M C T 1994BBd (33149)1943

K(Fe+H2L=FeL+2H)=-0.03

At 35 C, from kinetic data, K=-0.10. Also data for 40 and 45 C.

C4H8O2 HL Isobutyric acid CAS 79-31-2 (573)

2-Methylpropanoic acid; CH3.CH(CH3).COOH

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

Fe+++ EMF NaCl04 20°C 1.0M U K1=4.63 1959PEb (33229)1944

Also quoted: K1=3.6

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

Fe+++ sp alc/w 25°C 100% U K1=4.11 1971SSg (33337)1945

C4H8O3 HL CAS 965-70-8 (423)
2-Hydroxybutanoic acid; CH3.CH2.CH(OH).COOH

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

Fe+++ sp none 30°C 0.0 U 1976GCa (33578)1946

K1eff=3.86

Measured at pH 3.0

C4H9NO2 HL Aminoisobutyric CAS 144-90-1 (188)
2-Amino-2-methylpropanoic acid; H2N.C(CH3)2.COOH

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

Fe+++ EMF NaClO4 20°C 1.0M U K1=10.3 1958PEd (33838)1947

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

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

Fe+++ EMF NaClO4 20°C 1.0M U K1=9.7 1958PEd (33914)1948

C4H9NO2 HL (2590)
N-Acetylhydroxylamine ethyl ether; CH3.CO.NH.O.C2H5

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

Fe+++ EMF NaClO4 25°C 1.00M U K1=13.33 B2=24.98 1978SSe (34035)1949
K3=11.87

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

Fe+++ EMF NaClO4 20°C 1.0M U K1=8.6 1958PEd (34301)1950

C4H9N3O3 HL (6027)
Glycylglycine hydroxamic acid; H2N.CH2.CO.NH.CH2.CO.NHOH

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

Fe+++ gl KCl 25°C 0.20M C B2=18.90 1989BMc (34427)1951

B3=22.22, B(Fe2L)=16.58

B(FeH2L2)=30.16

B(FeH-2L2)=-3.99

B(FeH2L3)=36.23

C4H9N3O4 H2L CAS 39158-78-0 (4271)

Iminodiacethydroxamic acid; HN(CH₂.CO.NH.OH)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaCl04	20°C	0.10M	U			K1=14.80 B(Fe2L3)=44.0	1972KMb (34430)	1952
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C4H10N2O3		HL						CAS 4475-93-8	(5892)	
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Threoninehydroxamic acid;

2-Amino-N,3-dihydroxybutanamide;CH₃.CH(OH).CH(NH₂).CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.50M	C			B2=21.37 B3=27.76 B(FeHL)=16.90 B(FeH2L2)=32.37 B(FeHL2)=28.55	1994LEa (34602)	1953
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B(FeHL3)=34.89; B(FeH2L3)=41.16; B(FeH3L3)=46.03; B(FeH-2L2)=22.34

B(FeH-1L3)=19.23

Fe+++	gl	NaCl	25°C	0.2M	U	I		K1=11.79 B2=19.03	1994SKb (34603)	1954
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Also data for 43% v/v MeOH/H₂O, 52% v/v EtOH/H₂O, 59% v/v i-PrOH/H₂O,

61% v/v dioxane/H₂O.

C4H11NO8P2		H5L						CAS 2439-99-8	(2129)	
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N-Carboxymethyl-N,N-bis(methylenephosphonic acid); H₂OC.CH₂.N(CH₂.PO₃H₂)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KNO ₃	25°C	0.10M	U			K1=14.87 K(Fe+HL)=8.82 B(Fe(OH)L)=21.84 B(Fe(OH)2L)=26.95	1973KSg (35106)	1955
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Fe+++	gl	KNO ₃	25°C	0.10M	U			K1=14.65	1965WRa (35107)	1956
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K(Fe+HL)=8.65

K(FeLOH+H)=7.20

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.20M	C			B(FeHL)=22.06 B(FeH3L2)=45.14 B(FeH2L2)=38.36	2002ECa (35177)	1957
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C4H11O2PS2		H3L						CAS 298-06-6	(210)	
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O,O'-Diethyldithiophosphoric acid; (C₂H₅O)₂P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	EMF	mixed	25°C	90%	U		B3=17.82	1984GGa (35230)	1958
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Medium: 90% 2-propanol/H₂O, 0.1 M NaClO₄

Fe+++	sol	none	25°C	0.0	U		B3=4.29	1984HAa (35231)	1959
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C₄H₁₃N₃ L Dien CAS 111-40-0 (584)
1,4,7-Triazaheptane, 2,2'-Iminobis(ethylamine), diethylenetriamine;
NH₂.(CH₂)₂.NH.(CH₂)₂.NH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	NaNO ₃	25°C	0.10M	C		K1=18.76 B(FeH-1L)=15.18 B(FeH-2L)=10.91	2002MDa (35781)	1960
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K(Fe+L+B(OH)₄=FeL(H₂BO₄)+2H)=24.52, K(2Fe+2L+B(OH)₄=Fe₂L₂(BO₄)+4H)=43.97

C₄H₁₄N₂O₄P₂ H₂L CAS 37107-07-6 (4287)
Ethylenebis(iminomethylenephosphonous acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	KNO ₃	25°C	0.10M	U		K1=10.29	1971MMh (35830)	1961
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C₄H₁₄N₂O₆P₂ H₂L EDDPO CAS 1733-49-9 (2435)
1,2-Diaminoethane-N,N'-bis(methylenephosphonic) acid; (H₂O₃P.CH₂.NH.CH₂)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	EMF	KCl	25°C	0.10M	C		K1=24.65 B(FeHL)=31.75 B(Fe ₂ L)=28.40 B(FeH ₂ L)=37.40 B(Fe ₂ HL)=43.70	2002MNa (35878)	1962
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Also other constants

Fe+++	gl	KCl	25°C	0.10M	U		K1=>10	1965DKb (35879)	1963
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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
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Fe+++	dis	NaClO ₄	25°C	4.0M	C		K1=2.7 B2= 6.80 B3=9.6	1986SIc (35924)	1964
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Fe+++ sp NaClO4 25°C 1.00M U 1984TMa (36694)1972
K(Fe+HL=FeL+H)=0.75

Fe+++ sp NaClO4 25°C 1.0M C 1976MPe (36695)1973
K(Fe+HL=FeL+H)=1.3

C5H5NO L 3-Pyridinol CAS 109-00-2 (1475)
3-Hydroxypyridine; C5H4N.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	NaClO4	25°C	0.10M	U			1998Cwa (36708)1974	
							K(Fe(CN)5(H2O)+L)=3.86		

Medium: 0.1 M LiClO4, pH=5

Fe+++	gl	NaClO4	25°C	1.00M	C		K1=3.7	1980Tmc (36709)1975	
							K(Fe+HL=FeL+H)=-1.40		

Fe+++	sp	NaClO4	25°C	1.0M	C			1976MPe (36710)1976	
							K(Fe+HL=FeL+H)=-0.68		

C5H5NO HL 4-Pyridinol CAS 626-64-2 (1876)
4-Hydroxypyridine, Pyridin-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	kin	NaClO4	25°C	0.10M	U			1998Cwa (36713)1977	
							K(Fe(CN)5(H2O)+L)=2.23		

Medium: 0.1 M LiClO4, pH=5

Fe+++	gl	NaClO4	25°C	1.00M	C		K1=2.1	1980Tmc (36714)1978	
							K(Fe+HL=FeL+H)=-1.37		

C5H5NOS L CAS 23003-22-7 (2904)
3-Hydroxy-2-mercaptopyridine; C5H3N(OH)(SH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	alc/w	20°C	40%	C			2000HAa (36726)1979	
							K(Fe+H2L=FeHL+H)=2.10		
							K(Fe+HL)=8.20		

Medium: 40% v/v EtOH/H2O, 0.10 M NaClO4.

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
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Fe+++	gl	KCl	25°C	0.10M	U		K1=10.61 B2=20.11	1993LMc (36753)1980	
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K3=7.1

Fe+++ sp oth/un 25°C 0.10M C K1=10.3 B2=19.30 1985SRb (36754)1981
K3=7.6

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

Fe+++ sp alc/w 20°C 40% C 2000HAa (36785)1982
K(Fe+H2L=FeHL+H)=-0.15
K(Fe+HL)=7.35

Medium: 40% v/v EtOH/H2O, 0.10 M NaClO4.

Fe+++ sp oth/un 25°C 0.10M C K1=11.7 B2=21.50 1985SRb (36786)1983
K3=8.1

Fe+++ sp NaClO4 25°C 1.0M C 1976MPe (36787)1984
K(Fe+HL=FeL+H)=2.51

Fe+++ sp KCl 25°C 1.00M U M 1972CAb (36788)1985
K(Fe+Cl+HL)=12.13

Medium: 1.0 M HCl

C5H5NO2 HL CAS 35940-93-3 (3618)
3-Furancarboxaldehyde oxime (3-Furfuraldoxime); C4H3O.CH(:N.OH)

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

Fe+++ sp diox/w 21°C 40% U I K1=11.92 1978GMd (36816)1986

Fe+++ gl diox/w 15°C 75% U I K1=10.91 B2=19.80 1963ASa (36817)1987
K3=6.88

Medium: 75% dioxan, 0-0.104 M NaClO4. At 25 C: K1=12.64, K2=10.80, K3=11.50;

Also 35 C. DH(K1)-95.7 kJ mol⁻¹, DS=-78 J K⁻¹ mol⁻¹; DH(K2)-216; DH(K3)=-478

C5H5NO2 HL CAS 1121-23-9 (2315)
3-Hydroxypyridin-4(1H)-one;

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

Fe+++ sp oth/un 25°C 0.10M C K1=14.2 B2=25.80 1985SRb (36826)1988
K3=9.3

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

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

Fe+++ gl KCl 25°C 0.10M C B2=21.31 1992CMc (36842)1989
 B(FeHL)=18.5
 B(FeL2H)=25.62
 B(FeH2L2)=34.26
 B3=28.18

B(FeHL3)=35.02, B(FeH2L3)=41.35

Fe+++ sp NaCl04 26°C 0.10M C B3=29.9 1987K0b (36843)1990

C5H5O2F3 HL CAS 367-57-7 (163)

1,1,1-Trifluoropentane-2,4-dione; CF3.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.5M	C		K1=6.60	1998BLa (37053)	1991
Fe+++	gl	alc/w	25°C	75%	C		K1=5.56 B2=11.02 B3=13.39	1998ERa (37054)	1992

Medium: 75% v/v EtOH/H2O, 0.10 M KCl

Fe+++ dis NaCl04 25°C 4.0M C I K1=7.7 B2=14.40 1986SIc (37055)1993
 B3=19.8
 K(Fe+3L=FeL3(org))=24.0

Method: distribution from 4.0 M NaCl04 into CCl4.

Using MIBK, K(Fe+3L=FeL3(org))=24.4

Fe+++ sp NaCl04 25°C 0.50M C K(Fe+HL=FeL+H)=0.53 1983H0b (37056)1994

Fe+++ dis NaCl04 25°C 4.00M U K1=7.67 B2=14.40 1982SIa (37057)1995
 B3=19.84

C5H6N2O5 L CAS 2361-27-5 (2642)

2-Thiophenecarboxylic acid hydrazide; C4H3S.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	U		B3=14.25 K(Fe+3(H-1L))=39.25	1981BPc (37211)	1996

C5H6N2O2 HL CAS 3326-71-4 (2607)

2-Furanecarboxylic acid hydrazide; C4H3O.CONH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	U		B3=14.35 K(Fe+3(H-1L))=39.30	1981BPc (37304)	1997

Fe+++ sp non-aq 25°C 100% U M 1991UHa (37633)2004
 $K(\text{FeA}(\text{OCH}_3)_2 + 2\text{L} = \text{FeA}(\text{OCH}_3)_2\text{L}_2) = 0.87$

Medium: CH₂Cl₂. A=Octaethylporphine

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
Fe+++	sp	NaClO ₄	25°C	0.5M	C		K ₁ =10.5	1998BLa (37963)	2005
Fe+++	gl	alc/w	25°C	75%	C I		K ₁ =10.85 B ₂ =20.00 B ₃ =22.4	1998ERa (37964)	2006

Medium: 75% v/v EtOH/H₂O, 0.10 M KCl

In H₂O, 0.10 M KCl: K₁=10.76, B₂=19.6, B₃=26.8

Fe+++	dis	NaClO ₄	25°C	4.0M	C		K ₁ =11.4 B ₂ =20.80 B ₃ =26.7	1986SIc (37965)	2007
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$K(\text{Fe} + 3\text{L} = \text{FeL}_3(\text{org})) = 31.4$

Method: distribution from 4.0 M NaClO₄ into CCl₄.

Fe+++	dis	NaClO ₄	25°C	0.10M	C		K ₁ =10.5	1986SNa (37966)	2008
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Method: rate of distribution of volatile ligand between aqueous phase and inert gas phase. K(H+L)=9.17 assumed.

Fe+++	dis	NaClO ₄	25°C	4.0M	C		K ₁ =11.4 B ₂ =20.70	1985IIa (37967)	2009
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Method: extraction into CCl₄; analysis by spectrophotometry.
 $K(\text{Fe} + 3\text{HL}(\text{org}) = \text{FeL}_3(\text{org}) + 3\text{H}) = 0.5$.

Fe+++	gl	mixed	25°C	80%	C		K ₁ =10.61 B ₂ =20.30 B ₃ =27.98	1985MLa (37968)	2010
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Medium: 80% DMSO/H₂O

Fe+++	oth	NaClO ₄	25°C	0.0	C I	T	K ₁ =9.25 B ₂ =18.0 B ₃ =24.5	1982SLc (37969)	2011
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IUPAC evaluation

Fe+++	sp	oth/un	25°C	1.00M	U		K(Fe+HL=FeL+H)=1.55	1971FNa (37970)	2012
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Fe+++	dis	oth/un	20°C	0.10M	U		K ₁ =9.17 B ₂ =18.34	1971K0a (37971)	2013
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Fe+++	vlt	diox/w	25°C	50%	U		K ₂ =9.7 K ₃ =7.6	1969SMj (37972)	2014
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Medium: 50% dioxan, 0.5 M NaClO₄

Fe+++	vlt	NaClO ₄	25°C	0.10M	U		K ₂ =8.4 K ₃ =6.5	1963PBa (37973)	2015
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Fe+++	gl	oth/un	30°C	->0	U		K ₁ =9.8 B ₂ =18.8	1955IFa (37974)	2016
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K3=7.4

Fe+++ sp oth/un 25°C ->0 U K1=11.4 B2=22.10 1953BAa (37975)2017
K3=4.6

C5H8O4 H2L CAS 595-46-0 (1144)

Dimethylmalonic acid; HOOC.C(CH3)2.COOH

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

Fe+++ kin NaClO4 25°C 0.50M C K1=7.16 1977CCb (38211)2018

C5H8O4 H2L Glutaric acid CAS 110-94-1 (420)

Pentanedioic acid; HOOC.CH2.CH2.CH2.COOH

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

Fe+++ gl NaClO4 20°C 1.00M M K1=4.12 B2=6.93 1989MKa (38319)2019
K(Fe+HL)=2.50
K(Fe+2HL)=5.13
K(Fe+3HL)=6.18

Fe+++ gl NaClO4 25°C 0.10M U K1=7.72 B2=13.12 1973RMb (38320)2020

Fe+++ sp NaClO4 25°C 0.50M U K1=6.78 1968DMc (38321)2021

Medium: LiClO4

C5H8O7 H2L CAS 40120-71-6 (3022)

2,3,4-Trihydroxypentanedioic acid, Trihydroxyglutaric acid; HOOC.(CH(OH))3.COOH

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

Fe+++ sp oth/un ? ? U K1=22.68 1972GTc (38421)2022

Fe+++ oth none ? 0.0 U K1=0.92 1956FGa (38422)2023

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

Fe+++ EMF NaClO4 20°C 1.0M U K1=10.0 1958PEd (38614)2024

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

Fe+++ EMF NaClO4 20°C 1.0M U K1=9.0 1958PEd (38731)2025

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

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  NaNO3  25°C 0.50M C          K1=11.82 B2=19.80 1997DJb (39081)2026
                                     B(FeHL)=15.38
                                     B(FeH-1L)=8.58
                                     B(Fe2H-2L)=10.51
By spectrophotometry: K1=11.80, B2=19.76, B(FeHL)=15.36, B(FeH-1L)=8.56,
B(FeH-1L2)=16.44.
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Fe+++      gl  NaClO4 25°C 1.0M M          K1=4.41  B2= 4.09 1991MKa (39082)2027
                                     K(Fe+2HL)=1.48
                                     K(Fe+3HL)=2.36
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Fe+++      EMF NaClO4 20°C 1.0M U          K1=12.1      1958PEd (39083)2028
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C5H9NO4 H2L MIDA CAS 4408-64-4 (190)
N-Methyliminodiethanoic acid; CH3.N(CH2.COOH)2

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  KNO3   25°C 0.5M C          K1=10.99 B2=20.72 1999SEb (39254)2029
                                     B(FeH-1L)=7.87
                                     B(FeH-2L)=4.70
                                     B(Fe2L2)=23.75
                                     B(Fe2H-2L2)=18.28
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C5H9NO5 H3L (5231)
N-Hydroxyglutamic acid; HOOCCH2CH2CH(NHOH)COOH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  NaClO4 20°C 0.10M U          B2=22.16      1981KJb (39319)2030
                                     K(Fe+HL)=6.54
                                     K(Fe+HL+L)=17.80
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C5H9N3 L Histamine CAS 51-45-6 (103)
4(5)-(2'-Aminoethyl)imidazole; C3H3N2.CH2.CH2.NH2

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  NaNO3  25°C 0.10M U          B2=7.05      1993GAa (39537)2031
-----
Fe+++      gl  KCl    25°C .058M U T          K1=3.72      1961SMa (39538)2032
0 C: K1=3.76; 45 C: K1=3.15
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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
Fe+++	sp	NaCl	25°C	0.15M	C		K1=21.91 B(FeHL)=23.06 B(FeHL2)=41.02 B(FeH-2L)=17.78 B(FeH-2L2)=31.39 B(FeH-2L3)=45.07.	2002SMb (40078)	2033

Fe+++	gl	KCl	25°C	0.20M	C		B(FeHL)=18.92 B(Fe2HL)=31.70 B(Fe2L)=24.10 B(Fe2H-1L)=14.70 B(Fe2H2L)=36.65.	1993FBa (40079)	2034
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C5H10N2O4 H2L (7205)
 Glutarodihydroxamic acid; HONH.CO.CH2.CH2.CH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaNO3	25°C	0.15M	C		K1=17.09 B(FeHL)=18.97 B(Fe3L4)=69.95 B(Fe2L3)=4.86 B(FeH-1L3)=39.84 B(FeH-2L)=-12.79, B(Fe2H-2L3)=30.15	1986BGc (40083)	2035

Fe+++	sp	NaClO4	20°C	0.10M	U		K(Fe+HL)=11.61 B(Fe2(OH)L2)=56.74 K(2Fe+2HL+2L)=66.34	1981KJb (40084)	2036
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C5H10O5S2 HL CAS 110-50-9 (591)
 (Butoxy)dithiomethanoic acid; CH3.CH2.CH2.CH2O.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	dis	oth/un	25°C	0.25M	U		B3=17.2	1982SAa (40157)	2037

C5H10O3 HL CAS 53103-75-6 (4295)
 2-Ethoxypropanoic acid; CH3.CH(OC2H5).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	?	?	U		K1=2.92 B2=5.64	1970PKd (40245)	2038

C5H11NO2 HL Valine CAS 72-18-4 (43)

2-Amino-3-methylbutanoic acid; $\text{H}_2\text{N}.\text{CH}(\text{CH}(\text{CH}_3)_2)\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	EMF	NaClO4	20°C	1.0M	U			K1=9.6	1958PEa (40707)	2039
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C5H11NO2 HL (7503)

N-(2-Propyl)acetohydroxamic acid; $\text{CH}_3\text{CON}(\text{C}_3\text{H}_7)\text{OH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.20M	C			K1=12.04 B2=21.94 B3=29.64 K(Fe+HL=FeL+H)=2.78	1998FKa (40901)	2040
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C5H11NO2S HL Methionine CAS 63-68-3 (42)

2-Amino-4-(methylthio)butanoic acid; $\text{H}_2\text{N}.\text{CH}(\text{CH}_2.\text{CH}_2.\text{S}.\text{CH}_3)\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	oth	NaClO4	35°C	0.10M	C			K1=7.95 B2=12.65	1996TEa (41092)	2041
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Method: paper electrophoresis.

Fe+++	dis	NaClO4	35°C	0.10M	U			K1=7.95	1994TEa (41093)	2042
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Methd: Paper electrophoresis; Medium: 0.1 HClO4.

Fe+++	EMF	NaClO4	20°C	1.0M	U			K1=9.1	1958PEd (41094)	2043
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C5H11NO2S H2L D-Penicillamine CAS 52-67-5 (1323)

D-2-Amino-3-mercapto-3-methylbutanoic acid; $(\text{CH}_3)_2\text{C}(\text{SH})\text{CH}(\text{NH}_2)\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KN03	37°C	0.15M	M T			K1=11.02 B2=15.79	1979ZJa (41185)	2044
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At 20 C, 0.15 M KN03, K1=11.27, B2=16.25.

C5H11NO2S H2L Penicillamine CAS 52-66-4 (350)

DL-2-Amino-3-mercapto-3-methylbutanoic acid; $(\text{CH}_3)_2\text{C}(\text{SH})\text{CH}(\text{NH}_2)\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaClO4	25°C	1.00M	U				1995SJa (41259)	2045
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$K(\text{Fe}+\text{H}_3\text{L}=\text{FeHL}+2\text{H})=-1.20$

$K(\text{Fe}_2+\text{H}_3\text{L}=\text{Fe}_2\text{HL}+2\text{H})=-0.42$

Medium: LiClO4

Fe+++	kin	NaClO4	25°C	0.50M	C			K1=11.15	1983BMc (41260)	2046
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$K(\text{Fe}+\text{H}_2\text{L}=\text{FeL}+2\text{H})=-1.17$

Method: spectrophotometry.

C5H11NO2S2 HL CAS 1528-32-9 (2127)
Di(2-hydroxyethyl)dithiocarbamic acid; (HO.CH2.CH2)2N.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	1.00M	U			K1=5.70 B2=10.51 B3=16.32	1996BCg (41297)	2047

C5H12NO4P HL CAS 51276-47-2 (5704)
2-Amino-4-(methylhydroxyphosphoryl)butanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaCl04	23°C	0.10M	U			K1=10.04	1990YTa (41444)	2048

C5H12N2O L Diethylurea CAS 623-76-7 (2022)
1,3-Diethylurea; (CH3.CH2.NH)2.CO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	vlt	NaCl04	25°C	0.20M	U			K1=-0.22 K3=0.46 K4=0.66 K5=-0.097	1985Mcc (41459)	2049

Fe+++	vlt	NaCl04	20°C	0.20M	U			K1=-0.2 B2=0.1 B3=0.5 B4=1.2 B5=1.1	1980Mca (41460)	2050
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C5H12N2O2 HL Ornithine CAS 1069-31-4 (46)
2,5-Diaminopentanoic acid; H2N.CH2.CH2.CH(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaCl04	20°C	1.0M	U			K1=8.7	1958PEd (41575)	2051

C5H12N2O2 HL CAS 36207-49-5 (834)
2-Amino-N-hydroxypentanamide; CH3.CH2.CH2.CH(NH2).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.50M	C			B2=22.90 B3=27.58 B(FeHL)=16.91 B(FeHL2)=28.50 B(FeH2L2)=32.84	1991LEa (41591)	2052

B(Fe2H-2L2)=21.87; B(FeHL3)=35.03; B(FeH2L3)=41.54; B(FeH-1L3)=18.48;
B(Fe2H-1L3)=35.17; B(FeH-1L2)=15.65

C5H12N2O2S HL Met-hydroxamic CAS 19253-87-3 (5992)
 2-Amino-4-(methylthio)butanehydroxamic acid, Methionine hydrox.a.;
 CH3.S.CH2.CH2.CH(NH2).CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl	30°C	0.20M	U	I	K1=11.42 B2=18.88	1997SKb	(41605)2053
In 42% v/v MeOH/H2O, 0.20 M NaCl, K1=11.6, K2=8.54. In 59% v/v i-PrOH/H2O, 0.20 M NaCl, K1=12.40, K2=8.74.									

Fe+++	sp	NaCl	25°C	0.15M	U		K1=12.73 B(FeHL)=16.26 B(FeHL2)=26.12 B(FeH2L2)=30.94 B(Fe2L3)=38.24	1986EMa	(41606)2054
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 C5H13NO8P2 H4L (3714)
 N-(2'-Carboxyethyl)iminobis(methylenephosphonic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	U		K1=16.3	1965WRa	(41769)2055

 C5H13N2O2+ HL CAS 14122-13-5 (8321)
 Betaine hydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl	25°C	1.0M	C		K1=7.28 B2=13.41 B3=16.46	1984BKb	(41788)2056

 C5H14NO5P H2L CAS 5994-60-5 (1302)
 N,N'-Bis(2-hydroxyethyl)aminomethylphosphonic acid; (HO.CH2.CH2)2N.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	20°C	0.10M	U		K(Fe+OH+HL)=19.19 K(Fe(OH)HL=Fe(OH)L+H)=-4.28 K(FeOHL=Fe(OH)H-2L+2H)=-13.67 K(Fe(OH)L+2OH)=14.21	1970KMa	(41844)2057

 C6H2O4Cl2 H2L Chloranilic acid CAS 87-88-7 (1281)
 3,6-Dichloro-2,5-dihydroxy-1,4-benzoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	35°C	0.15M	U	T H	K1=5.75 B2=9.83	1967CAa	(42049)2058
K1=5.91(15 C), 5.81(25 C); B2=9.95(15 C), 9.84(25 C). DH(K1)=-14.0 kJ mol-1, DS=-64.4(?) J K-1 mol-1; DH(B2)=-10.9, DS=-15.1(?)									

 Fe+++ sp oth/un 35°C 0.15M U T H K1=5.16 B2=9.24 1967CAa (42050)2059
 K1=5.82(15 C),5.51(25 C); B2=9.74(15 C),9.47(25 C)
 DH(K1)=-61.4 kJ mol⁻¹,DS=102(?) J K⁻¹ mol⁻¹; DH(B2)=-10.9,DS=-30.9(?)

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
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Fe+++	sp	oth/un	21°C	0.40M	U		K1=1.80 B3=3.10	1955BKa (42110)2060	
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Medium:0.2-0.9(some EtOH)

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
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Fe+++	gl	non-aq	25°C	100%	C		K1=3.26 B2= 5.64	1984FMa (42228)2061	
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Medium: DMSO, 0.10 M KClO4.

Fe+++	sp	oth/un	21°C	0.40M	U		K1=1.05 B3=3.27	1955BKa (42229)2062	
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Medium:0.2-0.7(some EtOH)

C6H4O8Br2S2 H4L (4396)
 4,5-Dibromo-1,2-dihydroxybenzene-3,6-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	KN03	20°C	0.10M	U		K1=21.1 B2=35.70 K3=10.5	1971AHa (42331)2063	
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C6H5NO2 HL Picolinic acid CAS 98-98-6 (391)
 2-Pyridine-carboxylic acid; C5H4N.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	NaClO4	25°C	0.10M	C		K3=4.37	1986LLb (42535)2064	
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Fe+++	gl	NaClO4	35°C	1.00M	U T		K1=5.66 B(Fe(OH)L2)=25.19 B(Fe2(OH)2L4)=52.79	1984PHa (42536)2065	
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Fe+++	sp	NaClO4	25°C	2.67M	U T H		K(Fe+HL=FeL+H)=0.45	1982BPb (42537)2066	
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Data also available when T=35, 50, 65 and 75. DH=8.4 kJ mol⁻¹

Fe+++ gl KCl 25°C 0.50M U M K1=6.02 1980EEa (42538)2067
 $K(\text{Fe}(\text{OH})+\text{HL}=\text{FeL}+\text{H}_2\text{O})=3.32$
 ternary complex with pyridoxine (pyridoxol, vitamin B6)

Fe+++ gl NaCl04 20°C 0.10M U B2=12.88 1964Tia (42539)2068
 $B(\text{FeL}_2(\text{OH}))=23.92$
 $B(\text{FeL}_4(\text{OH})_2)=50.72$

Fe+++ EMF NaNO3 25°C 0.10M U K2=12.80 1960ANa (42540)2069
 $B(\text{FeL}_2(\text{OH}))=23.84$
 $B(\text{FeL}_4(\text{OH})_2)=50.76$
 $K(\text{FeL}_2\text{OH}+\text{H})=2.96$
 $K(2(\text{FeL}_2\text{OH}=\text{FeL}_4(\text{OH})_2)=3.06$

 C6H5NO2 HL Nicotinic acid CAS 59-67-6 (419)
 3-Pyridine-carboxylic acid; C5H4N.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	35°C	1.00M	U		K1=4.52 B(FeL3)=16.11	1984PHa (42671)	2070

 C6H5NO3 HL 2-Nitrophenol CAS 88-75-5 (510)
 2-Nitrohydroxybenzene; HO.C6H4.NO2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=5.99	1966JMb (42735)	2071

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
Fe+++	sp	alc/w	25°C	40%	C		K1=11.85 B2=23.70 K(Fe+HL)=12.03 K(FeL+HL=FeL2+H)=2.70 K(FeL+H)=2.53 K(Fe+LH2=FeHL+H)=2.72	1993ABe (42749)	2072

Medium: 40% v/v MeOH/H2O, 0.10 M NaCl04.

 C6H5NO3 HL 3-Nitrophenol CAS 554-84-7 (739)
 3-Nitrophenol; HO.C6H4.NO2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	U		K1=5.93	1969DMb (42770)	2073

Fe+++ sp KNO3 23°C 0.50M U I K1=6.69 1968MCb (42771)2074
 In 0.027 M NaCl04: K1=7.05

Fe+++	gl	NaClO4	25°C	0.10M	U		K1=6.95		1966JMb	(42772)2075

Fe+++	sp	oth/un	25°C	0.0	U		K1=7.78		1955MIa	(42773)2076

C6H5NO3		HL		4-Nitrophenol		CAS	100-02-7		(454)	
4-Nitrohydroxybenzene; H0.C6H4.NO2										

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

Fe+++	gl	non-aq	25°C	100%	C		K1=7.04	B2=12.40	1984FMa	(42801)2077
							B3=16.59			
Medium: DMSO, 0.10 M KClO4.										

Fe+++	sp	NaClO4	25°C	0.10M	U		K1=5.05		1969DMb	(42802)2078

Fe+++	sp	KN03	23°C	0.50M	U	I	K1=5.60		1968MCb	(42803)2079
In 0.027 M NaClO4: K1=5.86										

Fe+++	gl	NaClO4	25°C	0.10M	U		K1=5.74		1966JMb	(42804)2080

Fe+++	sp	oth/un	25°C	0.0	U		K1=5.74		1955MIa	(42805)2081

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

Fe+++	gl	KCl	25°C	0.10M	M		K1=15.71	B2=28.92	1986HAc	(42860)2082

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

Fe+++	gl	KCl	25°C	0.10M	M		K1=15.53	B2=28.63	1984HAc	(42925)2083
							B3=38.22			

Fe+++	gl	oth/un	27°C	0.10M	M		K1=17.08	B2=30.51	1978ASa	(42926)2084
							K3=9.51			

C6H5NO9S2		H4L					(3710)			
4-Nitroso-5,6-dihydroxybenzene-1,3-disulfonic acid;										

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

Fe+++	sp	NaCl	?	0.10M	U		K1=16.42	B2=28.45	1967BHa	(42973)2085
							K3=6.49			

C6H5OBr		HL		2-Bromophenol		CAS	95-56-7		(3673)	

2-Bromophenol; HO.C6H4.Br

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=6.98	1966JMb (43004)	2086
Fe+++	sp	oth/un	25°C	0.0	U		K1=7.19	1965EHb (43005)	2087

C6H5OBr		HL		3-Bromophenol		CAS	591-20-8	(3674)	
3-Bromophenol; HO.C6H5.Br									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=7.65	1966JMb (43009)	2088

C6H5OBr		HL		4-Bromophenol		CAS	106-41-2	(456)	
4-Bromophenol; HO.C6H4.Br									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KN03	23°C	0.50M	U	I	K1=7.72	1968MCb (43019)	2089
In 0.02 M NaCl04: K1=7.89									
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=8.00	1966JMb (43020)	2090
Fe+++	sp	none	25°C	0.0	U		K1=8.10	1955MIa (43021)	2091

C6H5OCl		HL		2-Chlorophenol		CAS	95-57-8	(3671)	
2-Chlorophenol; HO.C6H4.Cl									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	U		K1=6.07	1969DMb (43029)	2092
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=7.26	1966JMb (43030)	2093
Fe+++	sp	oth/un	25°C	0.0	U		K1=7.32	1965EHb (43031)	2094

C6H5OCl		HL		3-Chlorophenol		CAS	108-43-0	(3672)	
3-Chlorophenol; HO.C6H4.Cl									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	U		K1=6.88	1969DMb (43039)	2095
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=7.52	1966JMb (43040)	2096
Fe+++	sp	oth/un	25°C	0.0	U		K1=7.89	1965EHb (43041)	2097

C6H5OCl		HL		4-Chlorophenol		CAS	106-48-9	(1631)	

4-Chlorophenol; HO.C6H4.Cl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	U		K1=6.95	1969DMb (43051)	2098
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=7.95	1966JMb (43052)	2099
Fe+++	sp	oth/un	25°C	0.0	U		K1=7.92	1965EHb (43053)	2100

C6H5OF		HL					2-Fluorophenol	CAS 367-12-4	(3678)
2-Fluorophenol; HO.C6H4.F									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=7.19	1966JMb (43057)	2101
Fe+++	sp	oth/un	25°C	0.0	U		K1=7.33	1965EHb (43058)	2102

C6H5OF		HL					3-Fluorophenol	CAS 372-20-3	(3679)
3-Fluorophenol; HO.C6H4.F									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=7.77	1966JMb (43061)	2103
Fe+++	sp	oth/un	25°C	0.0	U		K1=7.77	1965EHb (43062)	2104

C6H5OF		HL					4-Fluorophenol	CAS 371-41-5	(3680)
4-Fluorophenol; HO.C6H4.F									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=8.29	1966JMb (43065)	2105
Fe+++	sp	oth/un	25°C	0.0	U		K1=9.38	1965EHb (43066)	2106

C6H5OI		HL					2-Iodophenol	CAS 533-58-4	(3675)
2-Iodophenol; HO.C6H4.I									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	25°C	0.0	U		K1=7.43	1965EHb (43068)	2107

C6H5OI		HL					3-Iodophenol	CAS 626-02-8	(3676)
3-Iodophenol; HO.C6H4.I									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=7.57	1966JMb (43070)	2108

C6H5OI HL 4-Iodophenol CAS 540-38-5 (3677)
4-Iodophenol; HO.C6H4.I

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

Fe+++ sp oth/un 25°C 0.0 U K1=8.63 1965EHb (43072)2109

C6H6NO5P H3L CAS 145432-83-3 (7384)
6-Phosphonopyridine-2-carboxylic acid; H00C.C5H3N.P03H2

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

Fe+++ gl KNO3 25°C 0.10M C K1=15.97 B2=25.47 1998Cmb (43222)2110
K(Fe(OH)2L+H)=8.53
K(Fe(OH)L+H)=3.25
K(FeL2+H)=2.60

C6H6N2O HL CAS 873-69-8 (1258)
Pyridine-2-aldoxime; C5H4N.CH:NOH

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

Fe+++ sp diox/w 21°C 40% U I K1=12.19 1978GMd (43296)2111

Fe+++ sp NaClO4 25°C 0.50M U K1=11.9 B2=23.3 1975CPc (43297)2112
B3=32.6
B(Fe2L)=14.2
*K1=2.62
*K2=3.15

*B(2,2)=3.20, *B(2,1)=5.77

Fe+++ gl KNO3 24°C 0.10M U K1=11.4 B2=21.70 1962BEa (43298)2113
K3=8.4

Fe+++ gl oth/un 25°C 0.0 U K(FeL3+H)=3.5 1962HIa (43299)2114

C6H6N2O2 HL (8281)
3-Hydroxy-2-amidocarboxypyridine, Hydroxypicolinamide;

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

Fe+++ gl KNO3 25°C 0.10M C K1=8.70 B2=16.49 1990Ara (43375)2115
K(FeL2+L)=6.39

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

Fe+++ gl KCl 25°C 0.10M U K1=8.7 B2=16.60 1975SDa (43452)2116

C6H6O HL Phenol CAS 108-95-2 (457)
Hydroxybenzene, phenol; C6H5.OH

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

Fe+++ sp NaClO4 25°C 0.10M U K1=7.76 1969DMb (43535)2117

Fe+++ sp KNO3 23°C 0.10M U 1969LRa (43536)2118
K(Fe+HL=FeL+H)=-2.17

Fe+++ sp KNO3 23°C 0.50M U I K1=7.81 1968MCb (43537)2119
In 0.027 M NaClO4: K1=8.11

Fe+++ sp oth/un 25°C ->0 U K1=8.20 1955MIa (43538)2120

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

Fe+++ sp KNO3 20°C 0.10M U B2=35.0 1981NAc (43756)2121
B3=44.2

Fe+++ gl oth/un 27°C 0.08M M K1=20.01 B2=34.70 1978ASa (43757)2122
K3=9.06

Fe+++ sp NaClO4 25°C 1.00M U T 1973MPc (43758)2123
K(Fe+H2L=FeL+2H)=-1.36
K(20 C)=-1.37, K(30 C)=-1.36

Fe+++ sp NaClO4 25°C 0.10M U K2=14.96 1969SZa (43759)2124
K(FeL+H2L=FeL2+2H)=-7.65
K(FeL2+H2L=FeL3+2H)=-13.8
K3=9.5

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

Fe+++ sp NaClO4 26°C 0.10M C B3=29.5 1987KOb (44083)2125

Fe+++ gl NaClO4 25°C 2.00M U K1=11.10 B2=20.40 1980GHa (44084)2126
K3=8.05
K(FeL(OH)+H)=3.8
K(FeL(OH)2+2H)=3.9

$$K(2FeL+2OH=Fe_2L_2(OH)_2)=24.0$$
[illegible]

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
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Fe+++ g1 KN03 25°C 0.10M U K1=10.2 B2=19.0 1962MUB (44211)2128
K3=7.53

$$K((\text{FeOHL})_2 + 2\text{H} = 2\text{FeL}) = 3.92$$
$$K(\text{Fe}(\text{OH})_2\text{L} + 2\text{H} = \text{FeL}) = 7.40$$
$$K((\text{Fe}(\text{OH})_2\text{L})_2 + 4\text{H} = 2\text{FeL}) = 9.92$$
$$K(\text{FeOHL} + \text{L} = \text{FeL}) = 3.16$$

Fe+++ sp oth/un 25°C 0.50M U K1=10.16 B2=18.45 1961MAa (44212)2129
K3=6.90

Fe+++	sp	oth/un	20°C	0.0	U	I	B2=17.5 B3=24.6	1961SLb (44213)2130
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$$K1=9.2(I=0.1), \quad B2=16.8(I=0.2)$$

Fe+++ EMF KCl 21°C 0.10M U K1=9.2 B2=17.2 19590Kb (44214)2131
B3=24.4

Method: H electrode

C6H6O4S H2L CAS 1333-39-7 (3686)
4-Hydroxybenzenesulfonic acid; HO.C6H4.SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++ sp KN03 23°C 0.50M U K1=6.72 1968Mcb (44266)2132

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
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Fe+++ g1 KN03 30°C 0.10M U K1=>17 K2=14.0 1963MNa (44282)2133
K3=9.1

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
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Fe+++ gl KCl 25°C 0.20M C M K1=18.61 B2=33.38 2002FCa (44426)2134
B3=44.44

B(FeH-1L2)=27.4

B(FeAL)=28.21

B(FeA2L)=40.88

B(FeH-1AL)=23.68. A is acetohydroxamic acid.

Fe+++ sp NaClO4 25°C 1.00M U H 1996ZJa (44427)2135

K(FeL+H)=0.018

K(Fe+H2L=FeL+2H)=0.30

K(FeL2+H)<1.8

K(FeL+H2L=FeL2+2H)=-3.77

K(FeL3+H)=4.13, K(FeL2+H2L=FeL3+2H)=7.47. DH(Fe+H2L=FeL+2H)=-21 kJ mol⁻¹,

DS(Fe+H2L=FeL+2H)=-66 J K⁻¹ mol⁻¹.

Fe+++ kin NaClO4 25°C 1.00M U 1994CJa (44428)2136

K(Fe2(OH)2+H2L=Fe2(OH)2H2L)=3.81

Fe+++ sp NaClO4 22°C 0.30M C I K1=19.50 1993LCa (44429)2137

At I=1.0 M, K1=18.94; at I=2.0 M, K1=18.22.

Data for 0.1-2.9 M NaClO4 and 0-50% w/w EtOH/H2O.

Fe+++ sp NaClO4 25°C 0.10M C 1989KAb (44430)2138

K(FeL+H2L=FeL2+2H)=-5.29

Fe+++ oth NaClO4 RT 0.10M C 1989KAc (44431)2139

K(FeL+H2L=Fe(HL)L+H)=5.34

Method: electrophoresis. Medium pH 2.5.

Fe+++ sp NaClO4 25°C 1.00M U 1988XJa (44432)2140

K(Fe+H2L=FeL+2H)=3.15

Fe+++ sp KCl 25°C 0.10M U K1=20.4 B2=35.50 1986SOa (44433)2141

K3=10.8

Fe+++ sp NaClO4 25°C 0.00 M I K1=19.49 1985LYa (44434)2142

Fe+++ gl oth/un 27°C 0.15M M K2=15.12 1978ASa (44435)2143

K3=10.10

Fe+++ sp NaClO4 25°C 1.00M U K1=4.16 1976MPa (44436)2144

K(Fe+H2L=FeL+2H)=0.16

Fe+++ gl NaNO3 25°C 0.50M U K2=14.23 1972MSb (44437)2145

K3=10.28

Fe+++ sp NaNO3 25°C 0.50M U K1=18.74 1972MSb (44438)2146

B(FeHL)=20.86

Fe+++ sp NaClO4 ? 0.10M U K2=15.03 1969SZa (44439)2147

K3=10.7

K(FeL+H2L=FeL2+2H)=-5.23

$$K(\text{FeL}_2 + \text{H}_2\text{L} = \text{FeL}_3 + 2\text{H}) = -9.55$$

 Fe+++ sp KNO3 25°C 1.0M U I M K1=18.8 B2=33.50 1964Mca (44440)2148
 K3=11.6

K1=20.4(I=0.1),19.3(I=0.5); K2=15.1(0.1),15.1(0.5); K3=10.8(0.1),11.6(0.5)
 In 0.1 M NaClO4:K1=20.4,K2=14.9,K2=10.1. Ternary complexes with TTHA

 Fe+++ gl oth/un 25°C 0.0 U K2=13.38 1956NVa (44441)2149
 K2=3.2

 Fe+++ sp oth/un 18°C 0.10M U K1=20.8 B2=36.20 1955VAa (44442)2150
 K3=11.5

 Fe+++ gl KCl 20°C 0.10M U K1=20.7 B2=35.90 1951WSa (44443)2151
 K3=11.0
 K(Fe+HL)=10.00

 C6H6S HL Thiophenol CAS 108-98-5 (883)
 Phenyl mercaptan, thiophenol; C6H5.SH

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

 Fe+++ kin non-aq 25°C 100% U 1993HOa (44546)2152
 K(L+Fe4S4A4--)= -0.54
 K(L+Fe4S4B4--)= -0.54
 K((MoFe3S4A3)2A3+L)= -0.39
 K((WFe3S4A3)2A3+L)= -0.14

Medium: MeCN. HA=ethanethiol; HB=tert-butylthiol

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

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

 Fe+++ sp non-aq 25°C 100% U M 1991UHa (44823)2153
 K(FeAOCH3+2L=FeAOCH3L2)= -0.75

Medium: CH2Cl2. A=Octaethylporphine. With 3,4-dimethylpyridine K= -0.64

 C6H7NO L CAS 7295-76-3 (3095)
 3-Methoxypyridine; C5H4N.OCH3

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

 Fe+++ kin NaClO4 25°C 0.10M U 1998Cwa (44993)2154
 K(Fe(CN)5(H2O)+L)=4.24

Medium: 0.1 M LiClO4, pH=5

 C6H7NO L CAS 620-08-6 (3096)
 4-Methoxypyridine; C5H4N.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	kin	NaClO4	25°C	0.10M	U			1998Cwa (45017)	2155
							K(Fe(CN)5(H2O)+L)=4.62		

Medium: 0.1 M LiClO4, pH=7.

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
Fe+++	gl	KCl	25°C	0.10M	C		K1=11.8 B2=21.63 B3=29.99	1992CMc (45025)	2156

Fe+++	sp	NaClO4	26°C	0.10M	C		B3=33.5	1987KOb (45026)	2157
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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
Fe+++	sp	KNO3	23°C	0.20M	C		K2=12.027 K3=9.734	1988TMa (45049)	2158

C6H7NO3	HL	CAS 99110-86-8	(8498)
1-Hydroxy-4-methoxy-2-pyridinone;			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	26°C	0.10M	C		B3=29.3	1987KOb (45056)	2159

C6H7O4As	H3L	CAS 98-14-6	(219)
2-Hydroxyphenylarsonic acid; HO.C6H4.As(:O)(OH)2			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	25°C	0.04M	U		K(Fe+HL)=11.99	1974NUa (45203)	2160

C6H7O4P	H3L	CAS 53104-46-4	(218)
2-Hydroxyphenylphosphonic acid; HO.C6H4.PO3H2			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	25°C	0.10M	U	I	K(Fe+HL)=8.69	1974NUa (45207)	2161

C6H8N2	L	CAS 108-50-9	(2531)
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2,6-Dimethylpyrazine, 2,6-Dimethyl-1,4-diazine; C₄H₂N₂(CH₃)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	oth/un	25°C	0.00	U	T	M		1985TSa (45287)	2162
K(Fe(NH ₃) ₅ L+H)=2.80										

C ₆ H ₈ O ₄		H ₂ L						CAS 5445-51-2	(69)	
Cyclobutane-1,1-dicarboxylic acid; C ₄ H ₆ (COOH) ₂										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	kin	NaCl04	25°C	0.50M	C			K ₁ =7.46	1977CCb (45507)	2163
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Fe+++	kin	NaCl04	25°C	0.50M	U			K ₁ =7.46	1971CDa (45508)	2164
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C ₆ H ₈ O ₆		H ₂ L	Ascorbic acid					CAS 50-81-7	(285)	
Ascorbic acid (Vitamin C);										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	kin	NaCl	25°C	0.05M	C	T	H		1987MZb (45640)	2165
K(Fe+2HL)=6.36										

Medium buffered to pH 5.0. Data for 15-35 C.

DH(Fe+2HL)=30.1 kJ mol⁻¹, DS=223 J K⁻¹ mol⁻¹.

C ₆ H ₈ O ₇		H ₃ L	Citric acid					CAS 77-92-9	(95)	
2-Hydroxypropane-1,2,3-tricarboxylic acid; H ₂ OCCH ₂ .CH(OH)(COOH).CH ₂ COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	NaCl	25°C	1.0M	C			K ₁ =9.50 B ₂ =15.30 2000KKc (46093)	2166	
B(FeH-1L)=7.31										
B(FeHL ₂)=19.12										
B(FeH-1L ₂)=10.46										

Fe+++	cal	none	25°C	0.01M	U		H		1993CZa (46094)	2167
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DH(K₁)=-29 kJ mol⁻¹, DS(K₁)=117 J K⁻¹ mol⁻¹; DH(B₂)=-18, DS(B₂)=289;

DH(B(FeHL))=-260, DS=-636; DH(B(FeH-1L))=-350, DS=-1012.

Fe+++	gl	NaNO ₃	25°C	0.50M	M		M		1989MAa (46095)	2168
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K(Fe+H₃L=FeH-1L+4H)=-8.0

K(2FeH-1L=Fe₂H-2L₂)=-20.1

K(UO₂+Fe+2H₃L=FeUO₂H-2L₂ + 8H)=-2.45

Fe+++	gl	NaNO ₃	25°C	0.50M	U			B ₂ =16.73	1989RSd (46096)	2169
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B(FeHL)=11.97

B(FeH-1L)=7.85

B(FeH₂L₂)=22.56

B(FeHL₂)=20.20

$B(\text{FeH-1L2})=12.18$, $B(\text{FeH-2L2})=6.58$, $B(\text{FeH-3L2})=1.35$.

Fe+++ vlt NaCl04 30°C 1.0M C K1=7.06 B2= 9.48 1988GMb (46097)2170
Method: polarography. Medium pH 5.0.

Fe+++ NaCl 25°C 0.15M U K1=11.2 B2=18.20 1986MAa (46098)2171
K(Fe+HL)=6.7
K(FeHL=FeL+H)=-1.3
K(FeL=FeH-1L+H)=-2.8

25-37 C. From a survey of literature data

Fe+++ sp NaCl04 20°C 1.0M C TI 1980MBb (46099)2172
K(Fe+H3L=FeL+3H)=-1.73
At 8C, K(Fe+H3L=FeL+3H)=-1.80. Also data for MeOH/H2O and n-PrOH/H2O mixtures.

Fe+++ sp oth/un 25°C >1.0 U K2=4.31 1978VKb (46100)2173
K(FeL+H)=1.18
K(FeH-1L+H)=2.11

Medium: 1 M (3H,3Na,Fe)L

Fe+++ ISE KNO3 25°C 0.50M C 1975VDA (46101)2174
K1eff=5.65 (pH 2.5)
Method: liquid phase Fe(III)-N-benzoyl-N-phenylhydroxylamine electrode.

Fe+++ EMF KNO3 25°C 0.10M U K1=11.21 1974FMA (46102)2175
B(FeHL)=12.38
B(FeH-1L)=8.60

Fe+++ gl NaCl04 25°C 0.10M U M K1=10.24 B2=15.94 1974RMC (46103)2176
B_{eff}(Fe+L+fulvic acid)=16.45
K(Fe(fulvic acid)+L)=11.07
K(FeL+fulvic acid)=6.21
K(Fe+L+HPO4)=19.46

K(FeL+HPO4)=9,22; K(FeHPO4+L)=10.51

Fe+++ gl NaCl04 25°C 0.10M U K1=10.24 B2=15.94 1973RMB (46104)2177

Fe+++ sp oth/un ? ? U K1=17.29 1972GTc (46105)2178

Fe+++ sp oth/un 25°C 0.30M U M 1971BIC (46106)2179
K(Sn+Fe+3L=FeSnH-1L3+H)=24.82

Fe+++ sp NaCl04 ? 1.00M U 1971KEc (46107)2180
K(Fe+H3L=FeH2L+H)=-1.12
K(Fe+H3L=FeHL+2H)=-2.00
K(Fe+H3L=FeL+3H)=-2.14

Fe+++ gl NaCl04 20°C 0.10M U K1=11.40 1964TIB (46108)2181
K(Fe2H-2L2)=21.2

By spectrophotometry: $K_1=11.56$

Fe+++	gl	NaClO4	25°C	1.0M	U	$K_1=11.85$ $K(\text{Fe+HL})=6.3$	1954HSa (46109)2182
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Polarography also used

Fe+++	gl	NaNO3	24°C	0.10M	U	$K(\text{FeL+3H=Fe+H3L})=1.82$ $K(\text{FeH-1L+H})=1.92$ $K(\text{Fe+L=FeH-1L+H})=9.46$ $K(\text{Fe+H-1L})=25$	1953WWa (46110)2183
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Fe+++	EMF	oth/un	?	0.10M	U	$K_1=11.7$	1952BEb (46111)2184
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By spectrophotometry $K_1=12.5$

Fe+++	oth	NaNO3	?	1.0M	U	$K(\text{Fe+HL})=6.31$	1948LQa (46112)2185
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C6H9NO6	H3L	CAS 41035-84-1 (4367)
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N-Carboxymethyl-L-aspartic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	KCl	25°C	0.10M	C		$K(\text{Fe+H2L})=4.19$	1982MDb (46378)2186
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C6H9NO6	H3L	NTA	CAS 139-13-9 (191)
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Nitrilotriethanoic acid; $\text{N}(\text{CH}_2\text{COOH})_3$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	NaClO4	20°C	0.10M	U		$K_1=16.72$	1999PKb (46806)2187
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Fe+++	sp	NaClO4	20°C	0.10M	U	M	$K_1=16.72$ $B(\text{Fe(OH)L})=22.97$ $K[\text{Fe(OH)L+H}]=3.8$	1999PKb (46807)2188
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Fe+++	gl	KNO3	25°C	0.5M	C	$K_1=15.09$ $B(\text{FeHL})=16.13$ $B(\text{FeH-1L})=11.18$ $B(\text{FeH-2L})=3.64$ $B(\text{Fe2L2})=30.92$	1999SEb (46808)2189
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$B(\text{Fe2H-2L2})=24.24$, $B(\text{FeHL2})=26.47$.

Fe+++	kin	KNO3	25°C	0.10M	U	T M	$K(\text{FeL+Hbipy=FeL(bipy)+H})=-1.60$	1997BBe (46809)2190
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Fe+++	EMF	KNO3	25°C	0.10M	C	$K_1=16.06$ $K[\text{Fe(OH)L+H}]=3.75$ $K[\text{Fe(OH)2L+H}]=7.4$	1997DFa (46810)2191
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Fe+++      gl  KCl      25°C 0.10M U      K1=15.9   B2=23.97  1994MMd (46811)2192
                                         *K(FeL(H2O))=-4.1
                                         *K(FeL(OH))=-7.58
                                         *K(FeL(OH)2)=-10.72
-----
Fe+++      dis NaClO4  35°C 0.10M U      K1=11.57          1994TEa (46812)2193
Methd: Paper electrophoresis; Medium: 0.1 HClO4.
-----
Fe+++      gl  NaClO4  25°C 1.00M U      K1=14.78          1986ANb (46813)2194
                                         B(FeHL)=15.67
-----
Fe+++      cal NaCl    25°C 0.10M C   H      1982GLb (46814)2195
DH(K1)=-17.1 kJ mol-1, DS(K1)=246 J K-1 mol-1; DH(K2)=4.2, DS(K2)=175.
-----
Fe+++      gl  NaClO4  25°C 0.10M U      M      K1=11.70   B2=19.84  1974RMc (46815)2196
                                         Beff(Fe+L+fulvic acid)=18.14
                                         K(Fe(fulvic acid)+L)=12.76
                                         K(FeL+fulvic acid)=6.44
                                         K(Fe+L+HPO4)=21.09
K(FeL+HPO4)=9.39; K(FeHPO4+L)=12.4
-----
Fe+++      EMF NaNO3   25°C 0.50M U      M      K1=16.33          1973MSa (46816)2197
                                         K(Fe+L=FeL(OH)+H)=12.35
                                         B(FeLA)=30.80
                                         B(FeLB)=26.60
H4A=pyrocatechol-3,5-disulfonic acid. H3B=sulfosalicylic acid
-----
Fe+++      gl  NaClO4  25°C 0.10M U      M      K1=11.70   B2=19.84  1973Rmb (46817)2198
                                         K(FeL+A)=8.08
                                         K(FeL+B)=7.84
                                         K(FeL+C)=7.28
                                         K(FeL+D)=7.89
H2A=malonic acid, H2B=succinic acid, H2C=glutaric acid, H2D=meso-tartaric
acid, K(FeL+E)=9.69, H3E=citric acid. Other data also given
-----
Fe+++      EMF NaClO4  20°C 0.10M U      T      K1=16.26          1967BAc (46818)2199
-----
Fe+++      gl  KNO3    20°C 0.10M U      1964PCa (46819)2200
                                         K(FeL+H2A=FeLA+2H)=-4.28
                                         B(FeLA)=31.85
H2A=tiron
-----
Fe+++      gl  KCl      25°C 1.0M U      1963GMc (46820)2201
                                         K(FeOHL+H)=5.0
                                         K(2FeL=(FeOHL)2+2H)=-6.0
                                         K(2FeOHL=(FeOHL)2)=4.0
-----
Fe+++      dis NaClO4  20°C 0.10M U      T      K1=15.91   B2=24.61  1963STc (46821)2202
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Fe+++	gl	KNO3	20°C	0.10M	U		K1=8.2	1958CGa (46822)	2203
Fe+++	EMF	KCl	20°C	0.10M	U	T	K1=15.87 B2=24.32 K(FeOHL+H)=4.08 K(FeL(OH)2+H=FeLOH)=7.77	1951SHa (46823)	2204
Fe+++	gl	KCl	20°C	0.10M	U		K1=>10 K(FeLOH+H)=4 K(FeL(OH)2+H)=9.0	1948SBa (46824)	2205

C6H9N3O2		HL						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
Fe+++	sp	oth/un	25°C	1.0M	C			1985BKb (47557)	2206
							K(Fe+HL=FeL+H)=1.0		
Medium not stated.									
Fe+++	sp	oth/un	25°C	?	U	M		1982WPa (47558)	2207
							K(FeA+2L)=4.40 K(2FeA+4L=2FeAL2)=-8.82		
A=Tetrakis(4-N-methylpyridyl)porphyrin									
Fe+++	gl	KCl	25°C	.058M	U	T	K1=4.00	1961SMa (47559)	2208
0 C, K1=4.21, 45 C, K1=3.72									
Fe+++	EMF	oth/un	20°C	0.20M	U		K1=4.7	1958PEd (47560)	2209

C6H10N2O6		H3L						(7019)	
N,N-Bis(carboxymethyl)aminoacetohydroxamic acid; (HOOCH2)2N.CH2.CO.NHOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	20°C	0.10M	U		K1=16.22 K(Fe+HL)=10.30 K(H+FeL)=3.50	1977KJa (47863)	2210

C6H10N4O2		HL						CAS 25486-00-4 (2554)	
2-Amino-3-(4'-imidazolyl)propanehydroxamic acid, Histidine-hydroxamic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl	25°C	0.15M	C		K1=13.389 B2=18.984 B3=21.606 B(FeHL)=18.070 B(FeHL2)=25.885 B(FeH-1L3)=12.441	1984BSd (47906)	2211

C6H10O2		HL						CAS 3002-24-2 (2742)	

2,4-Hexanedione; CH₃.CO.CH₂.CO.CH₂.CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.5M	C			K1=10.9	1998BLa (47929)	2212
Fe+++	gl	NaClO4	25°C	0.5M	U			K1=10.9	1990HMB (47930)	2213

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
Fe+++	sp	NaClO4	25°C	0.10M	U				1971PPb (48242)	2214
								K(Fe+HL)=4.35		

C6H10O7			HL	Galacturonic			CAS	685-73-4	(290)	
D-Galacturonic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	vlt	NaClO ₄	25°C	0.10M	U				1990DGA (48391)	2215
							B ₃ =8.51			
							B(FeH-2L ₃)=1.54			
							B(FeH-3L ₃)=-2.03			
Fe+++	gl	NaClO ₄	25°C	1.0M	U				1989DGA (48392)	2216
							B ₃ =8.51			
							B(FeH-3L ₃)=-2.03			
							B(FeH-2L ₃)=1.54			

C₆H₁₀O₈ H₂L Saccharic acid CAS 87-73-0 (1191)
D-2,3,4,5-Tetrahydroxy-1,6-hexanedioic acid, Glucaric acid; H₂OOC.(CHOH)₄.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO ₃	25°C	1.00M	U				1976V0a (48473)	2217
							K(Fe+H ₂ L=FeH-2L+4H)=-24.47			
							K(Fe+3H ₂ L=FeL ₃ +6H)=-9.2			

Fe+++	sp	KNO3	25°C	1.0M	C				1975V0a (48474)2218
						B3=3.12			

C6H11NO4		H2L		CAS 5336-17-4		(345)			
N-Ethyliminodiethanoic acid; C2H5.N(CH2.COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO ₃	25°C	0.5M	C			K ₁ =11.53 B ₂ =21.45	1999SEb (48602)	2219
								B(FeHL)=12.72		

B(FeH-1L)=8.19

B(FeH-2L)=5.38

B(Fe2L2)=24.5

B(Fe2H-2L2)=19.3.

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
Fe+++	sp	NaCl04	20°C	0.1M	C	M	K1=11.64 K(Fe+OH+L)=22.97	2000PKc (48726)	2220
Fe+++	sp	NaCl04	20°C	0.10M	U	M	K1=11.64 B(Fe(OH)L)=22.97 B(Fe(OH)2L)=31.17	2000PKc (48727)	2221
Fe+++	gl	NaCl04	25°C	1.00M	U		K1=11.60 B(FeHL)=13.80 B(FeH-1L)=8.57	1986ANb (48728)	2222
Fe+++	sp	oth/un	20°C	?	U		K(Fe+H2L)=4.18 K(Fe+HL)=11.75	1972KVa (48729)	2223
Fe+++	vlt	KNO3	25°C	0.10M	U		B(FeL(OH))=24.94 B(FeL(OH)2)=32.33	1965VF a (48730)	2224
Fe+++	gl	KCl	25°C	1.0M	U		K(FeOHL+H)=4.11 K(2FeL=(Fe(OH)L)2+2H)=-5.84 K(2FeOHL=(Fe(OH)L)2)=2.38	1960GMa (48731)	2225
Fe+++	EMF	KCl	20°C	0.10M	U		K1=11.61 K(FeLOH+H)=2.46 K(FeL(OH)2+H)=5.70	1955ASb (48732)	2226

C6H12N2O4 H2L EDDA CAS 5657-17-0 (119)

1,2-Diaminoethane-N,N'-diethanoic acid; HOOC.CH2.NH.CH2.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=15.50 *K(FeL)=-3.64 *K(Fe(OH)L)=-7.18	2001SGc (49239)	2227

C6H12N2O4 H2L N,N-EDDA CAS 5835-29-0 (2333)

1,2-Diaminoethane-N,N-diethanoic acid; H2N.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	KCl	20°C	0.10M	U		K1=16.92 B2=26.54 K(FeLOH+H)=3.88 K(FeL(OH)2+H)=7.61	1955ASb	(49301)2228

C6H12N2O4 H2L (6926)
N,N'-Dihydroxy-N,N'-dimethylbutanediamide; CH3N(OH).CO.(CH2)2.CO.N(OH)CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	kin	NaClO4	25°C	2.00M	C		K(Fe+H2L=FeHL+H)=5.08 K(Fe2HL2+H=2FeHL)=-2.0 K(Fe2L2+H=Fe2HL2)=-0.22	1994CCa	(49318)2229

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
Fe+++	gl	NaNO3	25°C	0.10M	C		K1=17.60	1989EHa	(49333)2230

C6H12N2O5 H2L (4384)
N-(Carboxymethyl)-N-(2-hydroxyethyl)aminoacethydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	20°C	0.10M	U		K1=14.31	1983KJb	(49369)2231
Fe+++	sp	NaClO4	20°C	0.10M	U		K1=18.54 K(FeL+20H)=22.87	1970MKa	(49370)2232

Fe+++	gl	NaClO4	20°C	0.10M	U		K1=18.50 B(FeL(OH)2)=41.2 B(FeL(OH)3)=50.5	1970MKa	(49371)2233
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C6H12N4O4 HL (6028)
Triglycine hydroxamic acid; H2N.CH2.CO.NH.CH2.CO.NH.CH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.20M	C		K1=11.63 B2=17.14 B3=20.50, B(Fe2L)=16.53 B(FeH2L2)=29.99 B(FeHL2)=24.37 B(FeH-2L2)=0.668	1989BMc	(49393)2234

B(FeH3L3)= 42.75, B(FeH2L3)= 35.72

C6H12N4O6 H3L (2677)

Nitrilotriacetohydroxamic acid; $N(CH_2.CO.NH.OH)_3$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	M			K1=18.63 B(FeHL)=23.73 B(FeH-1L)=11.88 B(FeH-2L)=2.85	1980LSb (49401)	2235

Fe+++	gl	NaClO4	20°C	0.10M	U			K1=19.35 K(Fe+H2L)=9.35	1975KAe (49402)	2236
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C6H12O5S HL (691)
1-Thio-beta-D-glucopyranose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO3	37°C	0.15M	M			B2=7.25	1979ZJa (49526)	2237

Method: ligand competition.

C6H12O6 L D-Fructose CAS 57-48-7 (1561)
D-Fructose

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	oth/un	20°C	?	U			K(Fe+L=FeH-1L+H)=-2.8	1986ASa (49547)	2238

Alternative method: spectrophotometry (UV, CD).

C6H12O7 HL Gluconic acid CAS 526-95-4 (904)
D-Gluconic acid, 2,3,4,5,6-Pentahydroxyhexanoic acid; $HO.CH_2(CH(OH))_4.CO_2H$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO3	20°C	0.10M	C	M		K1=10.51 B2=22.23 B(FeH-1L)=9.03 B(FeH-2L)=6.35 B(FeH-3L)=1.78 B(FeH-4L)=-8.4 B(FeH-1L2)=18.22, B(FeH-2L2)=15.30, B(FeH-3L2)=9.84, B(FeH-4L2)=-1.15, B(FeH-5L2)=-20.0, B(Fe2H-7L2)=-1.42. Also ternary Ca-Fe-L complexes.	2002BBb (49715)	2239

Fe+++	sp	NaClO4	25°C	0.30M	C			K1=9.63 B(Fe2L)=19.08	1983ZGa (49716)	2240
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Fe+++	oth	oth/un	?	0.10M	U			K[Fe+L=FeL(OH)3+3H]=-5.5 K(FeL=FeL(OH)2+2H)=-2.3 K(FeL(OH)2=FeL(OH)3+H)=-4.0 K(FeL(OH)3=FeL(OH)4+H)=-13.3	1955PSa (49717)	2241
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 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
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Fe+++	EMF	NaCl04	20°C	1.0M	U		T	K1=9.9	1958PEd	(50074)2242
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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
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Fe+++	gl	KCl	25°C	0.20M	C			K1=11.18 B3=28.40 K(Fe+HL=FeL+H)=1.82	1998FKa	(50227)2243
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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
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Fe+++	gl	NaCl04	25°C	1.00M	U			K1=7.35 B(FeHL)=9.68 B(Fe2H-2L2)=12.90	1986ANb	(50361)2244
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Fe+++	gl	oth/un	25°C	0.01M	U			K(Fe+HL+H2O=Fe(OH)2L+3H)=-7.4	1964NBa	(50362)2245
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Fe+++	vlt	NaCl04	25°C	0.50M	U			B2=5.9 B(FeL(OH)2)=30.1	1955TKb	(50363)2246
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C6H13NO5 L D-Glucosamine CAS 3416-24-8 (565)
 2-Amino-2-deoxyglucose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	NaCl	37°C	0.15M	U			B(Fe(OH)L)=19.15 B(Fe(OH)2L)=30.05	1987IAa	(50461)2247
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Fe+++	gl	NaNO3	25°C	0.10M	U	I		K1=8.47 B2=15.10	1984GMA	(50462)2248
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C6H14N2O2 HL (5984)
 Leucinehydroxamic acid; NH2.CH(CH2.CH(CH3)2).CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.50M	U			B2=22.89 B3=28.00	1991LNb	(50860)2249
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B(FeHL)=16.65
 B(FeHL2)=28.50
 B(FeH2L2)=32.60
 B(Fe2H-2L2)=21.48, B(FeHL3)=35.55, B(FeH2L3)=41.93,
 B(FeH-1L2)=15.98, B(Fe2H-1L3)=35.40.

C6H14N2O4 HL CAS 31918-44-2 (4383)
 N,N-Bis(2-hydroxyethyl)aminoacethydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	NaClO4	20°C	0.10M	U			1971KMc (50875)	2250
							B(FeL(OH))=26.17		
							B(FeL(OH)2)=35.67		
							B(FeL(OH)3)=40.37		

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
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Fe+++	gl	oth/un	25°C	?	U		K1=7.67 B2=15.20	1960PEd (51008)	2251
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Fe+++	EMF	NaClO4	20°C	1.0M	U		K1=8.7	1958PEd (51009)	2252
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C6H14O6 L Glucitol CAS 50-70-4 (2878)
 D-Sorbitol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	KNO3	25°C	0.10M	C			1999CMa (51102)	2253
							B(FeH-1L)=2.0		
							B(FeH-2L)=-2.8		
							B(FeH-3L)=-4.9		
							B(FeH-4L)=-14.0		

B(Fe3H-9L)=-12.8, B(Fe3H-10L)=-23.1, B(Fe6H-6L)=3.1, B(Fe6H-18L)=-24.2,
 B(Fe6H-24L)=-90.

C6H15NO3 Triethanolamine CAS 102-71-6 (447)
 Tris-(2-hydroxyethyl)amine; L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	NaClO4	25°C	1.00M	U		K1=<7 B(FeHL) < 9.4	1986ANb (51290)	2254
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Fe+++	sp	oth/un	?	?	U			1973KUa (51291)	2255
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K(FeOH+L)=3.5
 B(FeL2(OH)4)=44.6

C6H15N3 L CAS 4730-54-5 (26)
 1,4,7-Triazacyclononane; cyclo(-NH.CH2.CH2.NH.CH2.CH2.NH.CH2.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	20°C	0.10M	U T H		K1=13.24 B2=19.39	1997BAa	(51409)2256
At 32 C, K1=13.05. DH(K1)=-28.52 kJ mol-1. DS(K1)=94 J K-1 mol-1.									

Fe+++	gl	KNO3	25°C	0.10M	U			1988Pwa	(51410)2257
							K(FeH-1L2+H)=11.4		

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
Fe+++	gl	KCl	25°C	0.20M	C			2002ECa	(51426)2258

B(FeHL)=23.33
 B(FeH3L2)=47.8
 B(FeH2L2)=43.1
 B(FeH4L3)=66.1
 B(FeH3L3)=59.7, B(FeH2L3)=52.0, B(Fe2HL2)=37.3.

Fe+++	sp	NaClO4	25°C	2.0M	C			2002WSb	(51427)2259
							K(Fe+H2L)=6.80		
							K(Fe+2H2L)=12.4		
							K(Fe+3H2L)=16.1		
							K(Fe+H+HL)=15.69		

K(Fe+2H+2HL)=30.2, K(Fe+3H+3HL)=42.8.

C6H15N5O2 L CAS 5699-67-2 (6357)
 2-Amino-5-((Aminoiminomethyl)amino)-N-hydroxypentanamide, Arginine hydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.50M	C		B2=21.10	1991LNa	(51471)2260

B(FeH2L2)=31.04
 B(FeHL)=16.057
 B(FeHL2)=26.69
 B3=26.90
 B(Fe2H-2L2)=20.27; B(Fe2H-4L2)=7.53; B(FeHL3)=33.78; B(FeH-1L3)=18.35;
 B(Fe2H-1L3)=33.34; B(FeH2L3)=39.75

C6H15O2PS2 HL (2059)
 O,O'-Dipropyl dithiophosphoric acid; (C3H7O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	mixed	25°C	90%	U			1984GGa	(51487)2261

B3=17.97

Medium: 90% 2-propanol/H2O, 0.1 M NaClO4

C6H15O2PS2 HL CAS 25134-38-7 (4401)

Phosphorodithioic acid 0,0-diisopropyl ester; (CH3.CH(CH3)O)2PS.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	mixed	25°C	90%	U		B3=18.97	1984GGa	(51500)2262

Medium: 90% 2-propanol/H2O, 0.1 M NaClO4

C6H18N2O6P2 H4L (1363)

N,N'-Dimethyldiaminoethane-N,N'-dimethylphosphonic acid;

CH3N(CH2PO3H2).CH2.CH2.N(CH2.PO3H2)CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	oth/un	25°C	0.10M	U		K1=22.5	1976MDa	(51951)2263

C6H18N4 L Trien-tetramine CAS 112-24-3 (11)

1,4,7,10-Tetraazadecane; H2N.CH2.CH2.NH.CH2.CH2.NH.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaNO3	25°C	0.10M	C	M		2002MDa	(52102)2264
K(Fe+L+B(OH)4=FeL(H2BO4)+2H)=21.89, K(2Fe+2L+B(OH)4=Fe2L2(BO4)+4H)=37.68									
Fe+++	gl	NaNO3	25°C	0.10M	C		K1=21.77 B(FeH-1L)=15.47 B(FeH-2L)=10.85	2002MDa	(52103)2265

Fe+++	kin	oth/un	20°C	->0	U		K1=21.94	1958BGa	(52104)2266
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Fe+++	sol	oth/un	20°C	->0	U		K1=21.7	1958BGa	(52105)2267
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C6H18O24P6 HnL Phytic acid CAS 83-86-3 (745)

Cyclohexane-1,2,3,4,5,6-hexol-hexaphosphoric acid, Myo-inositol hexaphosphoric acid; H12L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	vlt	oth/un	25°C	0.7M	C		K1eff=22.3	2000WHa	(52225)2268

Competitive ligand (1-nitroso-2-naphthol) cathodic stripping voltammetry.

Medium: photo-oxidised seawater, pH 6.9. At pH 8 (kinetic): K1eff=22.4

C6H20N2O12P4 H8L EDTPA CAS 1429-50-1 (434)

Ethane-1,2-bis(iminobis(methylenephosphonic acid)); ((H2O3PCH2)2NCH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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$K(\text{FeL}+\text{HL}=\text{FeL}_2+\text{H})=0.4$, $K(\text{FeL}_2+\text{HL}=\text{FeL}_3+\text{H})=-4.0$

C7H5NO HL Salicylnitrile CAS 611-20-1 (3746)
2-Cyanophenol; H0.C6H4.CN

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

Fe+++ sp NaCl04 25°C 0.10M U K1=5.52 1969DMb (52574)2278

C7H5NO HL CAS 837-62-1 (4434)
3-Cyanophenol; H0.C6H4.CN

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

Fe+++ sp NaCl04 25°C 0.10M U K1=6.29 1969DMb (52576)2279

C7H5NO HL CAS 767-00-0 (1632)
4-Cyanophenol; H0.C6H4.CN

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

Fe+++ sp NaCl04 25°C 0.10M U K1=5.78 1969DMb (52581)2280

C7H5NO2 H2L CAS 67984-81-0 (1189)
4-Cyano-1,2-dihydroxybenzene; (H0)2.C6H3.CN

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

Fe+++ sp NaCl04 25°C 1.00M U 1976MPa (52593)2281

$K(\text{Fe}+\text{H}_2\text{L}=\text{FeL}+2\text{H})=3.31$

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

Fe+++ gl NaCl04 25°C 1.00M U T K1=7.24 1984PHa (52627)2282

C7H5NO4 H2L CAS 100-26-5 (2528)
2,5-Pyridinedicarboxylic acid, Isocinchomeric acid; C5H3N.(COOH)2

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

Fe+++ EMF NaCl04 25°C 0.10M U K1=7.77 B2=13.17 19700Ma (52669)2283
B3=23.28

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

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-----
Fe+++      gl  NaClO4 25°C 1.00M U T      B2=16.77      1984PHa (52772)2284
                                         B(FeHL2)=17.26
-----
Fe+++      sp  NaClO4 25°C 1.00M U T H      1982BPb (52773)2285
                                         K(Fe+H2L=FeL+2H)=2.36
Data also at 35, 50, 65, 80 C. DH=14.2 kJ mol-1 (calculated).
-----
Fe+++      gl  NaClO4 20°C 0.10M U      B2=16.74      1964TIa (52774)2286
-----
Fe+++      EMF NaNO3 20°C 0.10M U      K1=10.91 B2=17.13 1960ANa (52775)2287
*****
C7H5NO4      HL      CAS 3084-13-7 (3751)
5-Nitrotropolone;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  NaClO4 25°C 2.0M U      K1=6.57      19620Ua (52942)2288
*****
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
-----
Fe+++      gl  KNO3 30°C 0.10M C      K1=13.44 B2=22.94 1996MMa (52974)2289
                                         K3=7.3
-----
Fe+++      sp  oth/un 25°C 0.0 U      K1=14.193      1963EMd (52975)2290
*****
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
-----
Fe+++      gl  KNO3 30°C 0.10M C      K1=13.88 B2=24.08 1996MMa (53045)2291
                                         K3=8.3
-----
Fe+++      sp  NaClO4 25°C 1.00M U      1982MSe (53046)2292
                                         K(Fe+HL=FeL+H)=3.230
-----
Fe+++      oth oth/un ? ? U      K1=5.84      1971KHb (53047)2293
-----
Fe+++      sp  oth/un 25°C 0.0 U      K1=14.339      1963EMd (53048)2294
*****
C7H5NO5      H2L      Nitrosalicylic CAS 601-99-0 (2682)
2-Hydroxy-6-nitrobenzoic acid; HO.C6H3(NO2).COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  NaClO4 25°C 0.10M U      K1=12.81      1974CSa (53061)2295

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 C7H5N3O HL CAS 35252-03-0 (3142)
 2-Hydroxypyrido[3',4'-b]pyrazine;

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

 Fe+++ gl oth/un 20°C 0.01M U K1=11.0 1954AHb (53090)2296

C7H5O2Br HL CAS 4584-68-3 (2691)
 3-Bromotropolone;

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

 Fe+++ sp NaCl04 25°C 2.0M U K1=9.25 19650Ya (53114)2297

C7H5O2Br HL CAS 698-47-5 (3749)
 4-Bromotropolone;

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

 Fe+++ sp NaCl04 25°C 2.0M U K1=10.04 19640Yc (53119)2298

C7H5O2Br HL CAS 3172-00-7 (3750)
 5-Bromotropolone;

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

 Fe+++ sp NaCl04 25°C 2.0M U K1=9.74 19620Ua (53134)2299

C7H5O2Cl HL (3748)
 5-Chlorotropolone;

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

 Fe+++ sp NaCl04 25°C 2.0M U K1=9.92 19620Ua (53227)2300

C7H5O3Br H2L CAS 3883-95-2 (1111)
 3-Bromosalicylic acid; Br.C6H3(OH).COOH

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

 Fe+++ gl NaCl04 25°C 0.10M U K1=11.20 B2=20.43 1974JAa (53289)2301
 K3=6.28

 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

 Fe+++ gl NaCl04 25°C 0.10M U K1=15.47 B2=27.70 1983LEb (53309)2302

K3=10.64

Fe+++ sp oth/un 25°C 0.0 U K1=16.762 1963EMd (53310)2303

C7H5O3Cl H2L CAS 321-14-2 (1113)
5-Chlorosalicylic acid; Cl.C6H3(OH).COOH

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

Fe+++ gl NaCl04 25°C 0.10M U K1=15.74 B2=28.12 1983LEb (53339)2304
K3=10.84

Fe+++ sp NaCl04 25°C 1.00M U T 1982MSe (53340)2305
K(Fe+HL=FeL+H)=2.803

Fe+++ sp NaCl04 25°C 0.10M U K1=15.42 1976CHa (53341)2306

Fe+++ gl NaCl04 25°C 0.10M U K1=12.17 B2=22.61 1974JAa (53342)2307
K3=8.03

Fe+++ sp oth/un 25°C 0.0 U K1=16.842 1963EMd (53343)2308

C7H5O3I H2L CAS 119-30-2 (1114)
2-Hydroxy-5-iodobenzoic acid, 5-Iodosalicylic acid; I.C6H3(OH).COOH

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

Fe+++ gl NaCl04 25°C 0.10M U K1=15.35 B2=26.98 1983LEb (53361)2309
K3=9.36

Fe+++ gl NaCl04 25°C 0.10M U K1=12.30 B2=22.82 1974JAa (53362)2310
K3=8.41

C7H6NO2Cl HL CAS 17512-69-5 (1918)
2-Chloro-benzohydroxamic acid; Cl.C6H4.CO.NH.OH

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

Fe+++ sp NaCl04 25°C 1.00M U H 1989DBa (53380)2311
K(Fe+HL=FeL+H)=1.07

C7H6N2O4 H2L CAS 2683-49-0 (3753)
4-Aminopyridine-2,6-dicarboxylic acid (4-aminodipicolinic acid)

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

Fe+++ EMF KNO3 20°C 0.10M U K1=13.15 B2=22.89 1965ABa (53508)2312

C7H6N2S HL CAS 583-39-1 (2043)
2-Mercaptobenzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	alc/w	25°C	50%	U		K1=10.45	1978Zla (53529)	2313
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 C7H6O2 HL Salicylaldehyde CAS 90-02-8 (193)
 2-Hydroxybenzaldehyde, Salicylaldehyde; HO.C6H4.CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	NaCl04	25°C	1.0M	C	HM		1992DAb (53621)	2314
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K(Fe+HL=FeL+H)=3.73
 Data for 25, 30 and 35 C. DH(K)=31.8 kJ mol⁻¹, DS(K)=118 J K⁻¹ mol⁻¹.

Fe+++	gl	oth/un	25°C	3.0M	U	H	K1=8.75 B2=15.55	1956AGa (53622)	2315
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K1=8.70(15 C), 8,80(35 C). DH(K1)=8.4 kJ mol⁻¹, DS=197 J K⁻¹ mol⁻¹

Fe+++	gl	NaCl04	25°C	3.0M	U		K1=8.75 B2=15.55	1955AGa (53623)	2316
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C7H6O2	HL	Tropolone	CAS 533-75-5	(3129)
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2-Hydroxycyclohepta-2,4,6-trien-1-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	NaCl04	25°C	2.0M	U		K1=10.50	19620Ua (53672)	2317
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Fe+++	sp	oth/un	?	?	U		K1=11.0	19580Ma (53673)	2318
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C7H6O2	HL		CAS 100-83-4	(3724)
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3-Hydroxybenzaldehyde; HO.C6H4.CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	oth/un	25°C	0.0	U		K1=8.11	1965EHb (53704)	2319
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C7H6O2	HL		CAS 123-08-0	(455)
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4-Hydroxybenzaldehyde; HO.C6H4.CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	oth/un	25°C	0.0	U		K1=7.56	1965EHb (53709)	2320
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C7H6O2S	H2L	Thiosalicylic	CAS 147-93-3	(236)
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2-Mercaptobenzoic acid; HS.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	ISE	KN03	25°C	0.50M	C			1975Vda (53905)	2321
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K1eff=5.04 (pH 2.5)
 Method: liquid phase Fe(III)-N-benzoyl-N-phenylhydroxylamine electrode.

C7H6O3 H2L Salicylic acid CAS 69-72-7 (14)
2-Hydroxybenzoic acid, Salicylic acid; HO.C6H4.COOH

Medium: 50% EtOH, 0.1 M. In aqueous soln K1=16.44

Fe+++	sp	oth/un	18°C	0.25M	U	K1=16.48 K3=8.68	B2=28.16	1960COb (54211)	2336
Fe+++	gl	KCl	20°C	0.10M	U	K1=16.35	B2=28.25	1958PEe (54212)	2337
Fe+++	gl	oth/un	25°C	3.0M	U T H	K1=15.81 K1=15.95(15 C), 15.69(35 C). DH1=-22 kJ mol ⁻¹ , DS=230 J K ⁻¹ mol ⁻¹		1956AGa (54213)	2338
Fe+++	sol	oth/un	25°C	0.20M	U	K3=-0.07		1956CFa (54214)	2339
Fe+++	vlt	NaCl04	25°C	3.0M	U	K1=15.82 K3=7.82	B2=27.49	1955AGa (54215)	2340
Fe+++	sp	oth/un	15°C	0.0	U	K1=16.35		1952BEa (54216)	2341
Fe+++	sp	oth/un	?	?	U	K1=16.4 K3=5.7	B2=27.86	1947BAa (54217)	2342
Fe+++	sp	oth/un	?	0.10M	U	K1=16.4		1945BAb (54218)	2343

C7H6O3		H2L				CAS 99-96-7		(1371)	
4-Hydroxybenzoic acid; HO.C6H4.CO0H									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	15°C	->0	U		K1=15.2	1952BEb (54416)	2344

C7H6O4		H3L					CAS 303-38-8	(1398)	
2,3-Dihydroxybenzoic acid; C6H3(OH)2.CO0H									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	1.00M	U	T		1988XJa (54463)	2345
							K(Fe+H2L=FeL+2H)=6.95		
Fe+++	gl	NaCl04	25°C	1.00M	U	T		1987GNa (54464)	2346
							K(FeHL+H2L=FeH2L2+H)=-2.2		
							K(FeH2L3+H)=9.1		
							K(FeHL3+H)=9.8		
							K(FeL3+H)=10.9		
K(FeH2L2+H2L=FeH3L3+H)=-4.5. Alternative method: spectroscopy.									
Fe+++	gl	oth/un	27°C	0.10M	M	T	K1=7.3 B(FeHL)=23.5	B2=11.60	1978ASa (54465)
2347									
Fe+++	sp	alc/w	?	0.10M	U			1962TSc (54466)	2348
							K(Fe+H2L=FeLH+H)=4.21		
							K(Fe+H2L=FeL+2H)=1.58		

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
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Fe+++	gl	NaClO4	25°C	1.00M	U	T		1987GNa (54522)	2349
							K(Fe+H2L=FeHL+H)=2.80		
							K(FeHL+H2L=FeH2L2+H)=-1.5		
							K(FeH2L3+H)=8.6		
							K(FeHL3+H)=9.0		

K(FeHL3=FeL3+H)=-9.1. Alternative method: Spectrophotometry.

Fe+++	gl	NaClO4	25°C	0.10M	U		K1=14.09 B2=26.09	1974JAa (54523)	2350
							K3=10.92		

Fe+++	gl	NaClO4	25°C	0.10M	U			1966PAb (54524)	2351
							K(Fe+H2L=FeHL+H)=3.135		
							K(FeHL+H2L=Fe(HL)2+H)=1.75		
							K(Fe(HL)2+H2L=Fe(HL)3+H)=-3.7		
							K(Fe+H2L)=4.8		

2nd method: platinum electrode.

Fe+++	vlt	KCl	30°C	0.10M	U		K1=15.05	1965GJb (54525)	2352
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Fe+++	sp	oth/un	25°C	?	U			1964RSa (54526)	2353
							K(Fe+H2L=FeHL+H)=4.04		

Fe+++	sp	oth/un	?	0.10M	U	I		1962TSc (54527)	2354
							K(Fe+H2L=FeLH+H)=3.19		
							K(FeHL+H2L=FeH2L2+H)=1.61		

In 50% EtOH, 0.1 M K(Fe+H2L=FeHL+H)=4.18, K(FeHL+H2L=FeH2L2+H)=2.23

K(FeH2L2+H2L=FeH3L3+H)=-4.61

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
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Fe+++	gl	NaClO4	25°C	0.10M	U		K1=13.65 B2=25.31	1974JAa (54585)	2355
							K3=9.66		

Fe+++	sp	oth/un	?	0.10M	U			1962TSc (54586)	2356
							K(FeHL+H2L=FeH2L2+H)=2.07		
							K(FeH2L2+H2L=FeH3L3+H)=-3.94		

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
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Fe+++      gl  NaCl04  25°C  1.00M  U      T  K1=2.18      1987GNa (54605)2357
              K(FeHL+H2L=FeH2L2+H)=-1.4
              K(FeH2L3+H)=11.5
              K(FeH2L2+H2L=FeH3L3+H)=-4.6
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Fe+++      sp  NaCl04  25°C  1.00M  U      T      1982MSe (54606)2358
              K(Fe+HL=FeL+H)=2.348
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Fe+++      gl  NaCl04  25°C  0.10M  U      1966PAb (54607)2359
              K(Fe+H2L=FeHL+H)=2.76
              K(FeHL+H2L=Fe(HL)2+H)=1.2
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2nd method: platinum electrode

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C7H6O4      H3L      Protocatechuic      CAS 99-50-3 (875)
3,4-Dihydroxybenzoic acid; C6H3(OH)2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  NaCl04  25°C  1.00M  U      1987ABb (54670)2360
              K(Fe+H3L=FeHL+2H)=-0.70
              K(FeHL+H3L=Fe(HL)2+2H)=-5.3
              K(FeL2+2H)=5.70
              K(FeL2+H2L=FeL3+2H)=-11.20
-----

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Fe+++      sp  NaCl04  25°C  1.00M  U      1976MPa (54671)2361
              K(Fe+H2L=FeL+2H)=3.01
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Fe+++      EMF oth/un  ?  0.25M  U      K1=19.00  B2=33.54  1973MIb (54672)2362
              K3=10.85
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Fe+++      sp  oth/un  ?  0.25M  U      K1=18.99  B2=33.26  1973MIb (54673)2363
              K3=10.12
-----

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Fe+++      sp  NaCl04  ?  0.10M  U      1969SZa (54674)2364
              K3=8.8
              K(FeHL+HL)=15.5
              K(FeHL+H3L=Fe(HL)2+2H)=-5.76
              K(FeL2+H2L=FeL3+2H)=-12.51
-----

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C7H6O5      H4L      Gallic acid      CAS 149-91-7 (446)
3,4,5-Trihydroxybenzoic acid; C6H2(OH)3.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  KCl      25°C  0.10M  U      K1=22.28  B2=33.89  1972LMb (54751)2365
              K3=8.26
              K(Fe+HL)=18.05
              K(FeHL+HL)=7.96
              K(Fe(HL)2+HL)=7.15
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$K(\text{Fe}+\text{H}_2\text{L})=10.50$; $K(\text{FeH}_2\text{L}+\text{H}_2\text{L})=7.80$; $K(\text{Fe}(\text{H}_2\text{L})_2+\text{H}_2\text{L})=6.50$

C7H6O5S H2L CAS 632-25-7 (4436)

2-Carboxybenzenesulfonic acid; $\text{HOOC.C}_6\text{H}_4.\text{SO}_3\text{H}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaCl04	25°C	1.0M	U		K1=3.49 B2=5.57	1970PCc (54778)	2366

C7H6O5S H2L CAS 29848-93-9 (3151)

Salicylaldehyde-5-sulfonic acid; (5-Sulfosalicylaldehyde)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KCl	20°C	0.10M	U		K1=7.15	1972KEd (54797)	2367
Fe+++	EMF	KCl	20°C	0.10M	U		K2=5.44 K3=3.90	1972KEd (54798)	2368

C7H6O5S H2L CAS 2745-13-3 (3755)

Tropolone-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	2.0M	U		K1=8.71 B2=16.14 K3=5.72	19620Ua (54801)	2369

C7H6O6S H3L CAS 5965-83-3 (399)

5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; $\text{HO}_3\text{S.C}_6\text{H}_3(\text{OH}).\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	nmr	KNO3	25°C	1.00M	U		K1=13.44 B2=23.75	1993POa (54976)	2370
Fe+++	gl	NaNO3	25°C	0.50M	C		K1=17.05 B2=26.42 B(FeHL)=19.12 B(Fe2L3)=48.41 B3=32.76	1990SRb (54977)	2371

Fe+++	sp	NaCl04	25°C	0.10M	C			1989KAb (54978)	2372
							$K(\text{FeL}+\text{HL}=\text{FeL}_2+\text{H})=-1.42$		

Fe+++	oth	NaCl04	RT	0.10M	C			1989KAc (54979)	2373
							$K(\text{FeL}+\text{H}_2\text{L}=\text{Fe}(\text{HL})\text{L}+\text{H})=1.39$		

Method: electrophoresis. Medium pH 2.2.

Fe+++	sp	NaCl04	24°C	0.20M	U	M	K1=13.78 B2=18.22	1979DDa (54980)	2374
Fe+++	sp	NaCl04	25°C	0.10M	U	M		1976CSb (54981)	2375
							B(FeAL)=15.28		

Protonation constants of A(3-mercuri-5-sulfosalicylate): K1=12.03, K2=2.43

Fe+++	sp	NaClO4	25°C	0.10M	U	K1=14.96	1974CSa (54982)2376
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Fe+++	gl	NaClO4	25°C	0.10M	U	K1=11.65 K3=6.57	B2=21.73 1974JAa (54983)2377
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Fe+++	EMF	oth/un	?	?	U	K1=10.95 K3=7.00	B2=20.91 1972BMa (54984)2378
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Fe+++	sp	alc/w	?	40%	U I		1972PDa (54985)2379
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K(Fe+HL)=3.70
K(FeHL+HL)=-0.58
K(Fe(HL)2+HL)=-3.85

Medium: 40% MeOH, 0.1 M KNO3. In aqueous solution:

K(Fe+HL)(0%)=3.28, K(FeHL+HL)(0%)=-1.00, K(Fe(HL)2+HL)(0%)=-4.90

Fe+++	gl	NaNO3	25°C	0.50M	U	K1=12.08 K3=7.02	B2=23.22 1971MPa (54986)2380
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Fe+++	sp	NaNO3	25°C	0.50M	U	K1=12.08 K3=7.02	B2=23.22 1971MPa (54987)2381
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Fe+++	sp	NaClO4	25°C	0.50M	U		1970MRa (54988)2382
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K(Fe+H2L=FeL+2H)=0.69

Fe+++	sp	KNO3	25°C	0.50M	U		1970MRa (54989)2383
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K(Fe+H2L=FeL+2H)=0.49
K(FeL+H2L=FeL2+2H)=4.75
K(FeL2+H2L=FeL3+2H)=7.56

Fe+++	sp	KNO3	25°C	0.50M	U		1970MRa (54990)2384
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K(Fe+HL=FeL+H)=2.79
K(FeL+HL=FeL2+H)=-0.94
K(FeL2+HL=FeL3+H)=-4.13

Fe+++	EMF	NaClO4	25°C	1.0M	U		1970NPa (54991)2385
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K(Fe+HL)=4.30
K(FeHL+HL)=2.34

By spectrophotometry, values are 4.18, 2.14

Fe+++	sp	oth/un	25°C	0.12M	U	K1=15.42	1969SMf (54992)2386
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Fe+++	sp	oth/un	27°C	0.05M	U	K1=14.05 B3=33.10	B2=24.33 19660Ta (54993)2387
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Fe+++	sp	oth/un	18°C	0.10M	U	K1=5.05 K3=8.96	B2=15.76 1961TSd (54994)2388
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Fe+++	sp	oth/un	18°C	0.25M	U	K1=15.02	B2=25.76 1960COb (54995)2389
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K3=6.84

Fe+++ gl KCl 20°C 0.10M U K1=14.60 B2=25.15 1958PEe (54996)2390

Fe+++ sp oth/un ? 0.20M U I 1957NAa (54997)2391

*K(Fe+HL=FeL+H)=2.40

K=2.54(I=0.02),2.46(I=0.05). Recalculated values

Fe+++ gl oth/un 25°C 3.0M U H 1956AGa (54998)2392

DG(K1)=-82.8 kJ mol⁻¹, DH=-11, DS=243 J K⁻¹ mol⁻¹

Fe+++ vlt R4N.X ? 0.60M U B2=10.60 1956ITa (54999)2393

Medium: NH4Cl

Fe+++ sp oth/un 18°C 0.25M U K1=14.64 B2=25.18 1955VAb (55000)2394

K3=6.94

Fe+++ gl NaClO4 25°C 3.0M U K1=14.42 B2=25.18 1954AGa (55001)2395

K3=7.06

Fe+++ vlt oth/un 25°C 1.0M U 1951BP a (55002)2396

B3=42

Fe+++ sp oth/un 25°C 0.06M U I K1=4.89 1948FAa (55003)2397

At I=0.153 M K1=3.68

C7H7NO2 H2L Salicylaldoxime CAS 94-67-7 (1486)

2-Hydroxybenzaldehyde oxime; HO.C6H4.CH:N.OH

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

Fe+++ sp oth/un 20°C 0.26M U 1967MAj (55309)2398

K(Fe+H2L)=3.89

C7H7NO2 HL Salicylamide CAS 65-45-2 (3155)

2-Hydroxybenzamide; HO.C6H4.CO.NH2

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

Fe+++ gl oth/un 15°C 3.00M U T K1=9.99 1956AGa (55327)2399

K1=10.00(35 C)

Fe+++ gl oth/un 25°C 3.00M U K1=10.02 B2=17.32 1956AGa (55328)2400

Fe+++ gl NaClO4 25°C 3.0M U K1=10.02 B2=16.26 1955AGa (55329)2401

C7H7NO2 HL CAS 30659-61-1 (3757)

4-Aminotropolone;

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

 Fe+++ sp NaClO4 25°C 2.0M U K1=12.58 19640Yc (55399)2402

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

Fe+++ gl KCl 25°C 0.2M C K1=11.08 B2=21.20 1998FKa (55497)2403
 B3=28.80
 K(Fe+HL=FeL+H)=2.39

 Fe+++ sp NaClO4 25°C 1.00M U H 1989DBa (55498)2404
 K(Fe+HL=FeL+H)=2.12

 Fe+++ dis NaClO4 25°C 1.0M U K1=12.18 1965BGa (55499)2405
 Medium: HClO4

 Fe+++ EMF NaClO4 20°C 0.10M U K1=11.06 B2=20.43 1963ANe (55500)2406
 K3=7.4

C7H7NO3 H2L B-Resorcylamide CAS 5399-68-8 (3758)
 2,4-Dihydroxybenzoic acid amide; (HO)2.C6H3.CO.NH2

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

Fe+++ sp NaClO4 25°C 0.10M U K1=3.58 1966DEb (55535)2407

C7H7NO3 H2L CAS 89-57-6 (2675)
 2-Hydroxy-5-aminobenzoic acid, 5-Aminosalicylic acid; H2N.C6H3(OH).COOH

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

Fe+++ sp KCl 37°C 0.15M C 1993WWa (55549)2408
 B(FeHL2)=21.83

 Fe+++ sp NaClO4 20°C 0.10M U 1962TSc (55550)2409
 K(FeL+H)=2.36
 K(Fe+HL)=6.00
 K(Fe+H2L)=2.27

 Fe+++ sp oth/un 20°C 0.25M U K1=16.4 B2=29.4 1960COb (55551)2410
 K3=8.2

 Fe+++ gl oth/un 25°C 3.00M U K1=16.92 B2=29.01 1956AGa (55552)2411
 B3=36.1

 Fe+++ gl NaClO4 25°C 3.0M U K1=16.97 B2=29.01 1955AGa (55553)2412
 K3=7.04

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	1.00M	U	H		K(Fe+H2L=FeHL+H)=2.33	1989DBa (55594)	2413
Fe+++	gl	KCl	25°C	0.15M	C			K1=17.22 B2=29.55 B3=38.80 B(FeHL)=19.36 B(FeH2L)=19.23 B(FeH-1L)=10.39 B(FeH-2L2)=7.41, B(Fe2H-2L)=11.40, B(FeHL2)=31.09, B(Fe2H-3L2)=15.89	1989SEa (55595)	2414
Fe+++	sp	NaClO4	20°C	1.00M	U			B(FeHL)=9.09	1987SHb (55596)	2415

C7H7NO3 H2L (1112)
 4-Aminosalicylic acid; H2N.C6H3(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaClO4	25°C	0.10M	U			K1=14.14 B2=26.46 K3=10.00	1974JAa (55638)	2416
Fe+++	sp	NaClO4	25°C	0.50M	U			K(Fe+H2L=FeL+2H)=0.40 K(FeL+H2L=FeHL2+H)=3.03 K(FeL2+H2L=FeL3+2H)=10.65	1970MRa (55639)	2417
Fe+++	sp	NaClO4	25°C	0.50M	U			K(Fe+HL=FeL+H)=4.06 K(FeL+HL=FeL2+H)=-0.97 K(FeL2+HL=FeL3+H)=-5.70	1970MRa (55640)	2418
Fe+++	sp	oth/un	30°C	0.20M	U	I		K(Fe+HL=FeL+H)=-3.66 K=-3.43(I=0), -3.51(I=0.02), -3.59(I=0.05), -3.63(I=0.10)	1960DAa (55641)	2419

C7H7N3O2 H2L CAS 4463-97-2 (1654)
 2,6-Pyridinedialdoxime; C5H3N.(CH:NOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	EMF	KCl	25°C	.025M	U			K(FeHL+H)=2.299 K(FeL+H)=5.903	1977HMa (55741)	2420

C7H7N3O3 L CAS 606-26-8 (2643)

2-Nitrobenzoic acid hydrazide; O2N.C6H4.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaCl04	25°C	0.10M	U				1981BPc (55747)	2421
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B3=13.27

K(Fe+3(H-1L))=38.80

C7H7N3O3

L

CAS 618-94-0 (2644)

3-Nitrobenzoic acid hydrazide; O2N.C6H4.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	oth/un	25°C	0.10M	U				1981BPc (55752)	2422
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B3=12.60

K(Fe+3(H-1L))=36.45

C7H7N3O3

L

CAS 636-97-5 (2645)

4-Nitrobenzoic acid hydrazide; O2N.C6H4.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaCl04	25°C	0.10M	U				1981BPc (55757)	2423
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B3=11.97

K(Fe+3(H-1L))=35.38

C7H8N2O

HL

CAS 88-68-6 (4438)

Benzamide oxime; C6H5.C(:N.OH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	oth non-aq	?	100%	U			B2=6.68		1967MAa (55821)	2424
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Method: freezing point depression. Medium: nitrobenzene

C7H8N2O

HL

Salicylaldazone CAS 3291-00-7 (3760)

Salicylaldehyde-hydrazone; 2-(OH).C6H4.CH:N.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	mixed	25°C	20%	U	I	K1=10.563	B2=16.09	1985RRf (55848)	2425
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B(FeHL)=12.168

40% DMF, K1=11.005, K2=5.732, B(FeHL)=12.355,

In 60% DMF/H2O: K1=11.825, K2=5.990, B(FeHL)=12.879

C7H8N2O2

HL

CAS 5623-04-1 (1917)

2-Amino-benzohydroxamic acid; H2N.C6H3.CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaCl04	25°C	1.00M	U	H			1989DBa (55854)	2426
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$$K(\text{Fe}+\text{HL}=\text{FeL}+\text{H})=1.47$$

C7H8N2O2 HL Salicylic hydra CAS 936-02-7 (2646)
2-Hydroxybenzoic acid hydrazide; HO.C6H4.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.10M	U		K1=15.83 B2=29.70 B3=42.84	1981BPc (55874)	2427

C7H8N2O2 HL CAS 59393-77-0 (3158)
4-Aminosalicylamide (4-amino-2-hydroxybenzamide); H2N.C6H3(OH).CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaClO4	25°C	3.0M	U T H		K1=10.70	1956AGa (55911)	2428

DH(K1)=1.7 kJ mol⁻¹, DS=213 J K⁻¹ mol⁻¹. K1=10.67(15 C), 10.65(35 C)

Fe+++	gl	NaClO4	25°C	3.0M	U		B2=18.00	1956AGa (55912)	2429
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C7H8O HL m-Cresol CAS 108-39-4 (1494)
3-Methylphenol, 3-Methylhydroxybenzene; CH3.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	25°C	0.0	U		K1=8.51	1965EHb (56039)	2430

C7H8O HL p-Cresol CAS 106-44-5 (471)
4-Methylphenol, 4-Methylhydroxybenzene; CH3.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KN03	23°C	0.50M	U I		K1=8.33	1968MCb (56050)	2431

In 0.027 NaClO4: K1=8.73

Fe+++	sp	oth/un	25°C	->0	U		K1=8.20	1955MIa (56051)	2432
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C7H8O2 H2L Methylcatechol CAS 452-86-8 (525)
1,2-Dihydroxy-4-methylbenzene; CH3.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	1.00M	U			1976MPa (56066)	2433

$$K(\text{Fe}+\text{H2L}=\text{FeL}+2\text{H})=2.45$$

C7H8O8P2 H4L (6892)
1,2-((Phenylenedioxy)methylene)diphosphonic acid; C6H4O2C(P(O3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++ gl R4N.X 25°C 0.50M U K1=15.0 1985Gmb (56167)2434
Medium: 0.5 M Me4NCl

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
Fe+++	gl	KNO3	25°C	0.10M	C		K1=15.10 B2=26.61 B3=35.88	2004SGc (56429)	2435
Fe+++	gl	KCl	25°C	0.10M	C		K1=15.10 B2=26.61 K3=9.27	1994MRa (56430)	2436
Fe+++	gl	KCl	25°C	0.10M	C		K1=15.10 B2=26.61 K3=9.27	1992CMb (56431)	2437
Fe+++	gl	KCl	25°C	0.10M	C		K1=15.14 B2=26.68 B3=35.92	1991MMb (56432)	2438
Fe+++	sp	oth/un	25°C	?	U		K1=14.92 K3=9.79 B3=36.94 K(FeLOH+H)=4.23	1990HTa (56433)	2439
Fe+++	sp	NaCl04	26°C	0.10M	C		B3=34.5	1987K0b (56434)	2440

C7H9O4P H3L (7127)

Hydroxybenzene-2-(methylphosphonic acid); HO.C6H4CH2PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KNO3	20°C	1.0M	U		K(Fe+HL)=8.64	1995AAa (56524)	2441

C7H10N2 L CAS 1122-58-3 (492)

4-(N,N-Dimethylamino)pyridine; C5H4N.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	U	M	K(FeAOCH3)+2L=FeAOCH3L2)=1.96	1991UHa (56633)	2442

Medium: CH2Cl2. A=Octaethylporphine

C7H10N2O2S HL (560)

2-(Methanesulfonylamidomethyl)pyridine; C5H4N.CH2S(:O)2NHCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++ gl diox/w 30°C 45% U K1=11.70 B2=22.94 1982MYb (56684)2443
Medium: 45% v/v dioxan/H2O, 0.01 M KNO3

C7H1002 L CAS 1670-46-8 (4416)

2-Acetylcyclopentanone;

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

Fe+++ sp NaClO4 10°C 0.50M C 1994BSf (56712)2444

K(Fe+HL=FeL+H)=2.34

C7H1003 H2L (793)

Heptane-2,4,6-trione; CH3.CO.CH2.CO.CH2.CO.CH3

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

Fe+++ sp alc/w 25°C 70% C 1991HKd (56717)2445

B(FeHL)=12.24

K(Fe+HL+2H2O=FeH-3L+2H)=5.28

Medium: 70% v/v MeOH/H2O, 0.5 M NaClO4

C7H1004 H2L CAS 5802-62-3 (71)

Cyclopentane-1,1-dicarboxylic acid; C5H8.(COOH)2

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

Fe+++ kin NaClO4 25°C 0.50M C K1=7.62 1977CCb (56732)2446

C7H1007P2 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

Fe+++ gl KNO3 25°C 0.10M C 2002GKc (56763)2447

B(Fe2H-1L2)=42.21

B(Fe2H-2L2)=33.60

B(FeH3L2)=45.31

B(Fe2L2)=46.20

C7H11N06P2 H4L CAS 4712-06-5 (4470)

Amino(phenyl)methylenediphosphonic acid;

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

Fe+++ gl KCl 25°C 0.10M U K1=20.15 B2=27.52 1969Dmd (56942)2448

K(Fe+HL)=15.08

K(Fe+HL+L)=22.75

C7H1109P H5L (5041)

2-Phosphonobutane-1,2,4-tricarboxylic acid; H00CCH2CH2C(P03H2)(COOH).CH2COOH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe+++      gl  NaNO3   25°C 0.50M C                      1999SEa (57024)2449
                                     B(FeH-3L2)=51.44
                                     B(FeH-6L2)=41.57
                                     B(FeH-12L2)=12.41

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C7H12O2      HL                      CAS 7424-54-6 (4421)
Heptane-3,5-dione; CH3.CH2.CO.CH2.CO.CH2.CH3

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  NaClO4  25°C 0.5M C                      K1=11.8      1998BLa (57244)2450
-----
Fe+++      gl  NaClO4  25°C 0.50M U                      K1=11.8      1990HMB (57245)2451
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C7H12O4      H2L                      CAS 534-59-8 (480)
Butylpropanedioic acid (Butylmalonic acid); HOOCH(CH2)3.COOH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      kin NaClO4 25°C 0.50M C                      K1=7.30      1977CCb (57336)2452
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Fe+++      gl  NaClO4  30°C 0.10M U                      K1=7.07      B2=12.88     1976DGd (57337)2453
                                     K3=3.54

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Fe+++      kin NaClO4 25°C 0.50M U                      K1=7.30      1971CDa (57338)2454
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C7H12O4      H2L                      CAS 510-20-3 (482)
Diethylpropanedioic acid (Diethylmalonic acid); HOOCH(CH2)2.COOH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      kin NaClO4 25°C 0.50M C                      K1=7.86      1977CCb (57363)2455
*****
C7H13NO4      H2L                      CAS 16578-07-5 (341)
N-Propyliminodiethanoic acid; CH3.CH2.CH2.N(CH2.COOH)2

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  KNO3     25°C 0.5M C                      K1=12.09      B2=22.73     1999SEb (57530)2456
                                     B(FeHL)=13.39
                                     B(FeH-1L)=8.27
                                     B(FeH-2L)=6.02
                                     B(Fe2L2)=25.39

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B(Fe2H-2L2)=19.86
*****
C7H14N2O4      HL                      CAS 38937-65-4 (1661)
Pimelyldihydroxamic acid; HONH.CO.(CH2)5.CO.NHOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	vlt	KCl	25°C	0.15M	U		K1=17.30 B2=25.78 B(Fe2L3)=41.06	1987Mca (57820)	2457

C7H15NO2		HL					(7023)		
Heptanoic acid hydroxyamide, enantihydroxamic acid; C6H13.CO.NHOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaCl04	25°C	0.10M	U		K1=11.49	1979SRb (57916)	2458

C7H21N2O10P3		H6L					(7004)		
N-(2-Hydroxyethyl)-1,2-diaminoethane-N,N'N'-trimethylenephosphonic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	U		K1=19.6 K(Fe+HL)=12.7	1974KRd (58373)	2459

C8H4N2O4		HL					(4495)		
3-Nitrophthalimide;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	30°C	100%	U		K1=5.19 B2=9.57 K3=3.57 K4=2.76	1970MSf (58395)	2460
Medium: MeOH									

C8H5NO2		HL					(3811)		
3-Cyanotropolone;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	2.0M	U		K1=7.28	19650Ya (58411)	2461

C8H5NO2		HL					(3812)		
5-Cyanotropolone;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	2.0M	U		K1=7.53	19640Ya (58413)	2462

C8H5O2F3S		HL	TTA				CAS 326-91-0 (165)		
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

Fe+++	sp	NaClO4	25°C	0.5M	C	K1=7.02	1998BLa (58620)	2463
Fe+++	sp	oth/un	25°C	1.0M	U	K(Fe+HL=FeL+H)=0.65	1971JFa (58621)	2464
Fe+++	sp	oth/un	25°C	0.10M	U	K1=6.9	1964PCa (58622)	2465

C8H6N2O		HL				CAS 5423-54-1	(3217)	
4-Hydroxy-1,5-naphthyridine;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Fe+++	gl	oth/un	20°C	0.01M	U	K1=11.0	1954AHb (58738)	2466
						B3=27.8		

C8H6N2O		HL				CAS 17056-99-4	(3220)	
5-Hydroxyquinoxaline;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Fe+++	gl	oth/un	20°C	0.01M	U	K1=9.3	1954AHb (58747)	2467
						B3=25.8		

C8H6N2O		HL				CAS 17057-00-0	(3218)	
8-Hydroxy-1,6-naphthyridine;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Fe+++	gl	oth/un	20°C	0.01M	U	K1=10.3	1954AHb (58753)	2468
						B3=25.9		

C8H6N2O		HL				CAS 70730-36-8	(3219)	
8-Hydroxy-1,7-naphthyridine;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Fe+++	gl	oth/un	20°C	0.01M	U	K1=12.2	1954AHb (58758)	2469
						(6290)		

C8H6N2O		HL				8-Quinazolinol	CAS 7757-02-2	(3221)
8-Hydroxyquinazoline;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo

Fe+++ gl oth/un 20°C 0.01M U K1=10.6 1954AHb (58778)2471
B3=27.7

C8H7NO4 HL CAS 24195-03-7 (4498)
4-Methylpyridine-2,4-dicarboxylic acid,4-methyl ester; CH3.C5H2N(COOH)(COOCH3)

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

Fe+++ EMF NaCl04 25°C 0.10M U K1=6.11 B2=11.11 19700Ma (59146)2472
B3=23.00

C8H7NO6 H3L CAS 42050-90-8 (4500)
N-Glycylcomenamic acid, 2-carboxy-5-hydroxy-4-oxo-1(4H)-Pyridineethanoic acid;

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

Fe+++ sp NaCl04 ? 0.10M U K1=11.30 1973A0a (59167)2473

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

Fe+++ sp NaCl04 25°C 1.0M C HM 1992DAB (59461)2474
K(Fe+HL=FeL+H)=0.88

Data for 25, 30 and 35 C. DH(K)=39.8 kJ mol⁻¹, DS(K)=132 J K⁻¹ mol⁻¹.

Fe+++ gl diox/w 27°C 75% U K1=11.56 B2=20.76 1973KDc (59462)2475
Medium: 75% dioxan, 0.1 M NaCl04

Fe+++ gl oth/un 25°C 3.0M U H 1956AGa (59463)2476
DG(K1)=-60.3 kJ mol⁻¹, DH(K1)=3.4, DS=21.4 J K⁻¹ mol⁻¹

C8H8O2 HL 3-Acetylphenol CAS 121-71-1 (3795)
3-Hydroxyacetophenone; HO.C6H4.CO.CH3

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

Fe+++ sp oth/un 25°C 0.0 U K1=8.36 1965EHb (59478)2477

C8H8O2 HL 4-Acetylphenol CAS 99-93-4 (3796)
4-Hydroxyacetophenone; HO.C6H4.CO.CH3

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

Fe+++ sp oth/un 25°C 0.0 U K1=7.20 1965EHb (59487)2478

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	diox/w	?	40%	U		K1=11.88 B2=22.82 K3=9.6	1966SDa	(59596)2479

Medium: 40% dioxan, 0.1 M NaClO4

C8H8O2S HL 2-Thenoylaceton CAS 3151-27-2 (3224)
2-Thenoylaceton, 1-(2'-Thienyl)butane-1,3-dione; C4H3S.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	NaClO4	25°C	0.50M	U		K1=10.0	1990HMB	(59638)2480
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C8H8O2S HL 3-Thenoylaceton CAS 21808-13-9 (2736)
3-Thenoylaceton, 1-(3'-Thienyl)butane-1,3-dione; C4H3S.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	NaClO4	25°C	0.5M	C		K1=10.0	1998BLA	(59646)2481
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C8H8O3 H2L CAS 89-84-9 (4477)
2,4-Dihydroxyacetophenone (4-acetylresorcinol)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	NaClO4	?	0.10M	U			1968GDA	(59666)2482
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K(?)=2.90

C8H8O3 H2L o-Cresotic acid CAS 83-40-9 (2338)
2-Hydroxy-3-methylbenzoic acid; CH3.C6H3(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	EMF	NaClO4	25°C	0.10M	U			1966PAB	(59700)2483
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K(Fe+HL=FeL+H)=2.58

K(FeL+HL=FeL2+H)=0.5

K(FeL2+HL=FeL3+H)=-3.7

K(Fe+HL)=4.6

Fe+++	sp	oth/un	25°C	0.0	U		K1=18.130	1963EMD	(59701)2484
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C8H8O3 H2L p-Cresotic acid CAS 89-56-5 (3797)
2-Hydroxy-5-methylbenzoic acid, (5-methylsalicylic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	EMF	NaClO4	25°C	0.10M	U			1966PAB	(59709)2485
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K(Fe+HL=FeL+H)=2.98

K(FeL+HL=FeL2+H)=1.2

K(Fe+HL)=4.4

C8H8O3 H2L CAS 567-61-3 (3798)
2-Hydroxy-6-methylbenzoic acid, (6-methylsalicylic acid)

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

Fe+++ EMF NaCl04 25°C 0.10M U 1966PAb (59711)2486

K(Fe+HL=FeL+H)=2.58

K(FeL+HL=FeL2+H)=0.6

K(FeL2+HL=FeL3+H)=-3.0

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

Fe+++ sp none 30°C 0.0 U 1976GCa (59829)2487

K1eff=3.69

Measured at pH 3.0

Fe+++ gl NaCl04 25°C 0.10M U 1973RMb (59830)2488

K(Fe+H-1L)=18.01

K(FeH-1L+H-1L)=15.89

Fe+++ sp oth/un 25°C ? U K1=3.71 1961BBa (59831)2489

C8H8O3 H2L m-Cresotic acid CAS 50-85-1 (1244)
4-Methylsalicylic acid; CH3.C6H3(OH).COOH

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

Fe+++ EMF NaCl04 25°C 0.10M U 1966PAb (59997)2490

K(Fe+HL=FeL+H)=2.99

K(FeL+HL=FeL2+H)=1.3

K(Fe+HL)=4.7

Fe+++ sp oth/un 35°C 0.20M U I 1963KCa (59998)2491

Keff=5.00, 4.67, 3.68

At I=0 corr: Keff=6.01, 5.65, 4.64. Apparent constants varying with pH

Fe+++ oth oth/un ? 0.10M U I 1962POb (59999)2492

K(Fe+HL=FeL+H)=3.02

In 12% EtOH K(Fe+2HL=FeL2+2H)=2.44, K(Fe+HL=FeL+H)=3.95.

In 50% EtOH: K(Fe+2HL=FeL2+2H)=1.66, K(Fe+3HL=FeL3+3H)=-4.62

C8H8O3 HL CAS 119-36-8 (3196)
Methyl salicylate; 2-(OH)C6H4.COOCCH3

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

Fe+++ gl oth/un 15°C 3.00M U T K1=9.77 1956AGa (60015)2493
At 35 C: K1=9.85

Fe+++ gl oth/un 25°C 3.00M U H K1=9.79 1956AGa (60016)2494
DH(K1)=6.7 kJ mol⁻¹, DS=213 J K⁻¹ mol⁻¹

Fe+++ gl NaClO4 25°C 3.0M U K1=9.74 1955AGa (60017)2495

C8H8O4 H3L CAS 102-32-9 (1826)
3,4-Dihydroxyphenylethanoic acid; C6H3(OH)2.CH2COOH

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

Fe+++ gl oth/un 27°C 0.06M M K1=20.1 B2=34.9 1978ASa (60069)2496
K3=9.0

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

Fe+++ gl diox/w 35°C 50% U K1=6.06 B2=11.55 1971MAa (60088)2497
Medium: 50% dioxan, 0.1 M NaClO4

C8H9NO2 HL CAS 17512-73-1 (1916)
2-Methyl-benzohydroxamic acid; CH3.C6H4.CO.NH.OH

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

Fe+++ sp NaClO4 25°C 1.00M U H 1989DBa (60220)2498
K(Fe+HL=FeL+H)=1.72

C8H9NO2 HL CAS 2446-50-6 (8185)
N-Methyl-benzohydroxamic acid;

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

Fe+++ vlt non-aq 25°C 100% C 1992SSe (60267)2499
B3=38.4

Medium: acetonitrile, 0.20 M Et4NPF6. Method: cyclic voltammetry.

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

Fe+++ gl KCl 25°C 0.20M C K1=10.92 B2=20.12 1998FKa (60283)2500
B3=28.87
K(Fe+HL=FeL+H)=2.45

Fe+++ EMF NaClO4 25°C 1.00M U K1=10.83 1979SRb (60284)2501

Fe+++ gl NaClO4 25°C 1.00M U K1=10.82 B2=20.48 1978SSe (60285)2502

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

Fe+++ gl NaCl 37°C 0.15M U K1=9.90 1986AIa (60425)2503

B(Fe(OH)L)=20.53

B(Fe(OH)2L)=28.90

Equilibria est. ca.1 hour:point titration used.

Fe+++ gl NaCl 37°C 0.15M U K1=9.90 1986AId (60426)2504

K(Fe+L+OH)=20.53

K(Fe+L+2OH)=28.90

C8H9NO4 H2L (4520)

Dehydroethanoic acid oxime;

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

Fe+++ gl diox/w 35°C 50% U 1971MAa (60494)2505

K(Fe+HL)=5.78

K(Fe+2HL)=10.82

Medium: 50% dioxan, 0.01 M NaClO4

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

Fe+++ gl KCl 25°C 0.10M C K1=11.43 1992MMA (60903)2506

K(FeL+H)=2.49

*K(FeL)=-3.87

*K(FeH-1L)=-5.37

K(Fe+HL)=7.95

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

Fe+++ gl KCl 25°C 0.10M C K1=12.01 1992MMA (60915)2507

K(FeL+H)=2.37

*K(FeL)=-3.96

*K(FeH-1L)=-5.49

K(Fe+HL)=8.41

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
Fe+++	gl	KCl	25°C	0.10M	C			K1=10.70 K(FeL+H)=2.11 K(FeH-1L+H)=3.67 K(FeH-2L+H)=5.36	1989MMd (60927)	2508

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
Fe+++	kin	KN03	25°C	0.10M	C			K(Fe+HL)=21.14 K(FeHL+H)=1.52	1997EHa (61079)	2509

HL is the ligand form with both phenolic groups ionized.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	1.00M	C			B3=43.72 B(FeHL3)=55.25 B(FeH2L3)=65.86 B(FeH3L3)=76.08	1994GCa (61080)	2510

B(FeH2L2)=55.92, B(FeH2L)=34.56, B(FeHL)=30.71. Combined pH-metric and spec.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KN03	20°C	1.00M	C			K(Fe+H3L=FeL+3H)=-7.96 K(Fe+H3L=FeHL+2H)=-3.4 K(Fe+2H3L=FeL2+6H)=-29.0 K(Fe+2H3L=FeHL2+5H)=-19.96	1983CLd (61081)	2511

K(Fe+H3L=FeH2L+H)=-1.5, K(Fe+H3L=FeL(OH)+4H)=-15.3

C8H11NO3 HL Vitamin B6 CAS 65-23-6 (254)
 5-Hydroxy-6-methyl-3,4-pyridinedimethanol, Pyridoxine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaCl	25°C	0.15M	C			K1=10.64 B(FeHL)=13.02 B(FeH-1L)=7.60 B(FeH-1L2)=16.47 B(Fe2H-3L)=7.80	1988EHa (61115)	2512

B(Fe2H-2L2)=20.95, B(Fe2H-2L3)=29.65.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaCl	37°C	0.15M	U			K(Fe+HL)=4.69 K(Fe+OH+HL)=15.73	1984ABd (61116)	2513

K(Fe+20H+HL)=25.48
K(Fe+20H+2HL)=27.89

Fe+++ sp KCl 25°C 0.50M U 1977ESa (61117)2514
K(Fe+HL)=4.47

Fe+++ sp oth/un 20°C 0.25M U 1960COb (61118)2515
K(Fe+HL=FeL+H)=4.30
K(1/2HL+FeL=FeL3/2+1/2H)=-0.7

C8H11NO4S H2L (6643)
N-Ethyl-3,4-dihydroxybenzene sulphonamide;

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

Fe+++ gl NaClO4 25°C 1.00M U 1992AGa (61175)2516
K(Fe+H2L=FeL+2H)=-0.36
K(FeL+H2L=FeL2+2H)=-5.29
K(FeL2+H2L=FeL3+2H)=-9.18

K1 from spectrophotometry

C8H11NO8 H4L CAS 7408-20-0 (2608)
Amino-di(butanedioic acid);HN(CH(COOH)CH2.COOH)2

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

Fe+++ gl KCl 25°C 0.10M U H K1=14.70 B2=22.48 2002NKa (61207)2517
B(FeHL)=18.66
B(Fe(OH)L)=24.50
B(FeH2L)=20.10
B(Fe(OH)2L)=31.40

C8H12N2O2 HL Pyridoxamine CAS 85-87-0 (1175)
4-(Aminomethyl)-5-hydroxy-6-methyl-3-pyridinemethanol;

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

Fe+++ gl KNO3 25°C 0.10M U K1=>15 1957GMa (61420)2518

C8H12N2O7 H3L CAS 43101-36-6 (669)
Glycylglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO.NH.CH2.COOH

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

Fe+++ gl KNO3 25°C 0.10M C K1=10.56 1974MMb (61477)2519
K(FeL+H)=1.6
K(FeH-1L+H)=6.62

C8H12O2 HL CAS 874-23-7 (3203)
2-Acetylcyclohexanone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.5M	C		K1=11.9	1998BLa (61670)	2520
Fe+++	sp	NaClO4	25°C	0.50M	C		K1=11.65 K(Fe+HL=FeL+H)=1.39	1998BRb (61671)	2521

Fe+++ gl NaClO4 25°C 0.50M U K1=11.9 1990HMB (61672)2522

 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
Fe+++	gl	KNO3	25°C	0.10M	C		B(Fe2L2)=45.22 B(Fe2H-1L2)=41.47 B(Fe2H-2L2)=32.50 B(Fe2H-3L2)=22.04	2002GKc (61739)	2523

B(FeH3L2)=46.61

 C8H13NO6S H3L (5675)
 2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; H0OC.CH2.S.CH2.CH2.N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	con	NaClO4	25°C	0.10M	U		K1=13.3 K(Fe+HL)=3.02	1975POa (61824)	2524

By potentiometry: K(FeL+OH)=7.01

 C8H14O2 HL CAS 3002-23-1 (4485)
 6-Methylheptane-2,4-dione; CH3.CO.CH2.CO.CH2.CH(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.5M	C		K1=11.1	1998BLa (62052)	2525

Fe+++ gl NaClO4 25°C 0.5M U K1=11.1 1990HMB (62053)2526

 C8H14O2 HL CAS 14090-87-0 (4486)
 Octane-2,4-dione; CH3.CO.CH2.CO.CH2.CH2.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.5M	C		K1=11.3	1998BLa (62061)	2527

 C8H14O4S3 H2L (2526)
 3,6,9-Trithiaundecanedioic acid; H0OC.CH2.S.C2H4.S.C2H4.S.CH2.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.10M	U		K(Fe+HL)=5.26	1971PPc (62123)	2528

C8H15NO2		HL					CAS 6051-21-4	(8043)	
Cyclohexylacetohydroxamic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaNO3	25°C	0.10M	C		B3=34.22	1996Nwa (62165)	2529

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
Fe+++	gl	KNO3	25°C	0.10M	C		K1=26.32	1983IMb (62250)	2530

C8H16N2O4		H2L					CAS 13288-40-9	(3237)	
1,2-Diaminoethane-N,N'-di(3-propanoic acid); (HOOCCCH2CH2NHCH2.)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	30°C	0.10M	U		K1=13.1 K(FeLOH=FeL+OH)=10.0 K(FeL(OH)2=FeL(OH)+OH)=7.0	1953CCb (62502)	2531

C8H16N2O4		H2L					(6925)		
N,N'-Dihydroxy-N,N'-dimethylhexanediamide; CH3N(OH).CO.(CH2)4.CO.N(OH)CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	kin	NaClO4	25°C	2.00M	C		K(Fe+H2L=FeHL+H)=4.89 K(Fe2HL2+H=2FeHL)=-1.47 K(Fe2L2+H=Fe2HL2)=-0.027	1994CCa (62513)	2532

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
Fe+++	gl	NaNO3	25°C	0.10M	C		K1=18.01	1989EHa (62539)	2533

C8H16N2O6		H2L					CAS 50730-95-5	(4548)	
Ethylenediiminobis(3-hydroxy-2-propanoic acid);									

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

 C8H19O2PS2 HL CAS 2253-44-3 (2060)
 O,O'-Dibutyl dithiophosphoric acid; (C4H9O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	mixed	25°C	90%	U			1984GGa (63155)	2540

B3=18.00

Medium: 90% 2-propanol/H2O, 0.1 M NaClO4

 C8H19O2PS2 HL CAS 107-55-1 (4585)
 O,O-Di-sec-butylldithiophosphoric acid; (CH3.CH2.CH(CH3)O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	mixed	25°C	90%	U			1984GGa (63170)	2541

B3=19.55

Medium: 90% 2-propanol/H2O, 0.1 M NaClO4

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	U			1965DKb (63338)	2542

K(Fe+HL) > 10

 C8H22N2O8P2 H4L CAS 55703-43-0 (1354)
 N,N'-Di-(2-hydroxyethane)ethylenediamine-N,N'-dimethylphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	oth/un	25°C	0.10M	M		K1=22.1	1976MRa (63370)	2543

 C9H6NOBr HL CAS 1198-14-7 (3281)
 5-Bromo-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	diox/w	25°C	75%	U			1958TWb (63644)	2544

B3=35.6

Medium: 75% dioxan, 0.3 M NaCl

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	diox/w	25°C	60%	U			1973SCd (63662)	2545

B3=34.38

Medium: 60% dioxan, 0.1 M NaClO4

C9H6NOF HL CAS 387-97-3 (3283)

5-Fluoro-8-hydroxyquinoline;

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

Fe+++ gl diox/w 25°C 50% U 1958TWb (63673)2546

B3=35.6

Medium: 50% dioxan, 0.3 M NaCl

C9H6NOI HL CAS 15207-63-1 (3282)

5-Iodo-8-hydroxyquinoline;

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

Fe+++ EMF diox/w 25°C 75% U 1958TWb (63683)2547

B3=34.2

Medium: 75% dioxan, 0.3 M NaCl

C9H6NO4BrS H2L CAS 3062-38-2 (4688)

5-Bromo-8-hydroxyquinoline-7-sulfonic acid;

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

Fe+++ sp oth/un 25°C dil U K1=12.02 1970BBd (63687)2548

C9H6NO4BrS H2L CAS 3062-37-1 (3889)

7-Bromo-8-hydroxyquinoline-5-sulfonic acid;

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

Fe+++ sp NaClO4 20°C 0.10M U K1=9.28 1970ABd (63695)2549

C9H6NO4ClS H2L CAS 3244-71-1 (4687)

5-Chloro-8-hydroxyquinoline-7-sulfonic acid;

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

Fe+++ sp oth/un 25°C dil U K1=11.67 1970BBd (63710)2550

Fe+++ sp oth/un 25°C ? U 1968BBc (63711)2551

K(Fe+HL=FeL+H)=3.5

C9H6NO4IS H2L CAS 3075-21-6 (4689)

5-Iodo-8-hydroxyquinoline-7-sulfonic acid;

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

Fe+++ sp oth/un 25°C dil U K1=12.22 1970BBd (63717)2552

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

Fe+++ sp NaCl04 45°C 1.0M C H K1=0.78 1994DAb (63793)2553
Data for 40-50 C. DH(K1)=37.7 kJ mol-1, DS(K1)=133.5 J K-1 mol-1.
By kinetics at 45 C, K1=0.77

Fe+++ gl KNO3 25°C 0.10M C K1=11.79 B2=21.20 1985ZHa (63794)2554
K3=5.62

Fe+++ sp KCl 25°C 0.10M U I K1=11.5 B2=22.00 1982GTa (63795)2555
K3=9.7

In Fe(III)-ferron-CTMAC solution K1=11.5, K2 < 9.7, K3 > 12.2

Fe+++ sp oth/un 20°C 0.0 U I K1=3.22 B2=7.74 1972PBc (63796)2556
K3=4.25

Medium: 10% EtOH, I=0. B3=12.3, 30% EtOH: B3=11.8, 50% EtOH: B3=11.1

Fe+++ gl KCl 25°C 0.10M U K1=8.9 B2=17.3 1961SLa (63797)2557
K3=7.9

Fe+++ sp oth/un 30°C 0.30M U H B2=7.46 1960SDa (63798)2558
Medium: 0.3 M K2SO4. DG(K1)=-43.30 kJ mol-1. By glass electrode B2=7.64

Fe+++ EMF diox/w 25°C 50% U 1958TWb (63799)2559
B3=31.5

Medium: 50% dioxan, 0.3 M NaCl

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

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

Fe+++ gl diox/w 25°C 60% U 1973SCd (63863)2560
B3=25.89

Medium: 60% dioxan, 0.1 M NaCl04

C9H6O3 HL CAS 3952-69-0 (3852)
5-Hydroxybenzo[b]-4-pyrone (5-hydroxychromone);

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

Fe+++ sp alc/w 20°C 10% U K1=12.74 B2=23.25 1968MIa (63940)2561
K(Fe+HL=FeL+H)=1.99
K(FeL+HL=FeL2+H)=-0.24

Medium: 10% MeOH, 0.1 M (H,Na)Cl04

Fe+++ sp alc/w 20°C 10% U K1=12.74 B2=23.25 1968MIa (63941)2562
Medium: 10% MeOH, 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

Fe+++ sp oth/un ? ? U 1969MPf (64005)2563

K(FeOH+HL)=3.85

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

Fe+++ sp oth/un ? ? U 1969MPf (64009)2564

K(FeOH+HL)=3.75

C9H7NO HL Oxine CAS 148-24-3 (504)

8-Hydroxyquinoline (8-quinolinol);

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

Fe+++ sp NaClO4 25°C 1.00M C T HM 1992DAa (64262)2565

K(Fe+H2L=FeL+2H)=-0.84

By calorimetry: DH(K1)=44.7 kJ mol⁻¹, DS=127 J K⁻¹ mol⁻¹

Fe+++ gl KNO3 25°C 1.00M U I K1=13.41 B2=25.44 1987VZa (64263)2566

B3=36.93

For 0.313 mol fraction dioxan/H2O K1=14.01; B2=26.77; B3=38.33. Also data
for other dioxan fractions.

Fe+++ gl diox/w 25°C 60% U 1973SCd (64264)2567

B3=37.74

Medium: 60% dioxan, 0.1 M NaClO4

Fe+++ sp NaClO4 25°C 0.10M U K1=13.69 B2=26.3 1968TSa (64265)2568

B3=36.9

Kso=-43.51

Fe+++ EMF diox/w 25°C 50% U 1958TWb (64266)2569

B3=38.00

Medium: 50% dioxan, 0.3 M NaClO4

Fe+++ EMF diox/w 25°C 75% U 1958TWb (64267)2570

B3=37.20

Medium: 75% dioxan, 0.3 M NaClO4

Fe+++ gl oth/un 20°C 0.01M U K1=12.3 B2=23.6 1954AHb (64268)2571

B3=33.9

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-----
Fe+++      sp  oth/un 25°C  0.0  U          K1=14.52      1949SSa (64269)2572
*****
C9H7N02          HL                      CAS 1127-45-3  (4614)
8-Hydroxyquinoline-N-oxide;
-----
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  diox/w 30°C  50%  U          K1=11.0   B2=21.10  1970GMb (64404)2573
Medium: 50% dioxan, 0.3 M NaCl04
*****
C9H7N04S          H2L   Sulfoxine          CAS 84-88-8  (448)
8-Hydroxyquinoline-5-sulfonic acid;
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  NaCl04 25°C  1.00M C          K1=12.07  B2=23.24  1994GCa (64538)2574
                                   K3=9.42
                                   B3=32.66
-----
```

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-----
Fe+++      sp  NaCl04 25°C  1.00M C T HM          1992DAa (64539)2575
                                   K(Fe+H2L=FeL+2H)=-0.63
By calorimetry: DH(K1)=44.0 kJ mol-1, DS=128 J K-1 mol-1
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-----
Fe+++      sp  oth/un 25°C   ?  U          1968BBd (64540)2576
                                   K(?)=3.80
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-----
Fe+++      gl  KNO3   25°C  0.10M U          K1=11.6   B2=22.8   1959RGa (64541)2577
                                   K(FeLOH+H)=3.02
                                   K(FeL(OH)2+H)=3.94
                                   K(FeL2OH+H)=5.02
                                   K(FeL2(OH)2+2H)=5.45
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-----
Fe+++      EMF diox/w 25°C  50%  U          1958TWa (64542)2578
                                   B3=35.65
Medium: 50% dioxan, 0.3 M NaCl
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-----
Fe+++      gl  oth/un 20°C  0.01M U          K1=12.0      1953ALa (64543)2579
*****
C9H7N04S          H2L                      CAS 3062-35-9  (4676)
8-Hydroxyquinoline-7-sulfonic acid;
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  oth/un 25°C  dil  U          K1=11.57      1970DBb (64595)2580
*****
C9H8N2          L                      CAS 578-66-5  (503)
8-Aminoquinoline;
-----
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	20°C	0.10M	U		K1=3	1957WSa (64782)	2581

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	C		B2=29.09	1996LHa (64815)	2582

C9H8O3		HL					CAS 1738-16-5	(3854)	
4-Acetyl-tropolone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	2.0M	U		K1=9.60	1964OYc (64880)	2583

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	?	0.10M	U		K1=11.65 B2=21.90 K3=6.90	1966SDa (64939)	2584

C9H8O4		H2L					CAS 2613-89-0	(1145)	
Phenylmalonic acid; HOOC.CH(C6H5).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaClO4	30°C	0.10M	U		K1=6.65 B2=12.35 K3=3.28	1976DGd (64994)	2585

C9H9NO4		H2L		Salicylglycine			CAS 487-54-7	(3869)	
N-(2-Hydroxybenzoyl)glycine, 2-hydroxyhippuric acid; HO.C6H4.CO.NH.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaClO4	25°C	0.10M	U		K(Fe+HL=FeL+H)=2.09 K(FeL+HL=FeL2+H)=0.57 K(FeL2+HL=FeL3+H)=-4.1 K(Fe+HL)=3.9	1966PAb (65094)	2586

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

Fe+++ gl alc/w 25°C 50% C K2=8.30 1999GAa (65133)2587
Medium: 50% EtOH/H2O, 0.10 M NaNO3.

C9H10NO3Br H2L (6645)

N-Ethyl-5-bromo-3,4-dihydroxybenzamide;

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

Fe+++ gl NaClO4 25°C 1.00M U 1992AGa (65185)2588

K(Fe+H2L=FeL+2H)=-0.33

K(FeL+H2L=FeL2+2H)=-4.37

K(FeL2+H2L=FeL3+2H)= -8.20

K1 from spectrophotometry. Data also for 5-nitro- and 5-fluoro- analogues

C9H10O2 HL CAS 6921-64-8 (4595)

2-Hydroxy-4-methylacetophenone; HO(CH3).C6H3.CO.CH3

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

Fe+++ gl diox/w 27°C 75% U K1=9.76 B2=17.38 1973KDc (65327)2589

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

C9H10O2 HL CAS 1450-72-2 (4596)

2-Hydroxy-5-methylacetophenone; HO(CH3).C6H3.CO.CH3

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

Fe+++ gl diox/w 27°C 75% U K1=7.90 B2=14.73 1973KDc (65334)2590

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

C9H10O2 HL CAS 610-99-1 (4597)

2-Hydroxypropiophenone;

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

Fe+++ gl diox/w 27°C 75% U K1=9.69 B2=17.12 1973KDc (65344)2591

Medium: 75% dioxan, 0.1 M NaClO4

C9H10O3 H2L CAS 5792-36-9 (4599)

2,4-Dihydroxypropiophenone; (OH)2.C6H3.CO.C2H5

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

Fe+++ sp NaClO4 ? 0.10M U 1968GDa (65424)2592

K(?)=3.11

C9H10O3 H2L CAS 1643-34-0 (4598)

2,6-Dihydroxy-4-methylacetophenone; (HO)2(CH3).C6H2.CO.CH3

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

K(Fe+HL)=7.80
K(FeHL+HL)=16.07

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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$$K_{1eff}=3.69$$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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B3=26.0
K(2Fe+2L=Fe₂(OH)₂L₂+2H)=16.9

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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$$K(?) = 3.19$$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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$$K_3 = 8.51$$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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$$K(?) = 3.20$$

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
Fe+++	gl	KNO3	25°C	0.10M	C		K1=18.41 B2=29.42 B3=37.97 B(FeH2L2)=35.60	2002SGb (66303)	2600

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
Fe+++	gl	NaCl	25°C	0.12M	U		K1=18.39 K(Fe+H2L)=10.28 K(FeL+2H)=13.53	1978RMc (66397)	2601

Fe+++	sp	NaClO4	25°C	1.00M	U		K(Fe+H3L=FeHL+2H)=2.71	1976MPa (66398)	2602
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C9H11NO6S H3L CAS 73487-23-7 (5467)
N,N-Dimethyl-2,3-dihydroxy-5-sulfonatobenzamide; HS03.C6H2(OH)2.CONMe2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	U		K1=18.7 B2=32.0 B3=40.3	1982PWa (66461)	2603

Fe+++	gl	KNO3	25°C	0.10M	C		K1=ca.41 K(Fe+HL=FeL+H)=7.23 K(FeL+HL=FeL2+H)=1.81 K(FeL2+HL=FeL3+H)=-3.21	1981HRa (66462)	2604
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By spectrophotometry: K(FeL+HL=FeL2+H)=1.87, K(FeL2+HL=FeL3+H)=-3.13

C9H12N2O HL (6765)
N-(2-Aminoethyl)salicylideneimine; HO.C6H4.CH:NCH2CH2NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	mixed	25°C	80%	C		K1=19.0	1991LMa (66563)	2605

Medium: 80% w/w DMSO/H2O, 0.1 M KClO4

C9H12N2O4S H2L CAS 42197-15-9 (4685)
N-(5-Sulfo)salicylidenediaminoethane; H03S.C6H3(OH).CH:N.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	20°C	0.10M	U		B2=29.9	1972KEd (66626)	2606

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	C		K1=15.21 B2=26.97 K3=9.78	1994MRa (66794)	2607

C9H13NO2 HL CAS 116407-52-4 (5869)
3-Hydroxy-1-butylpyridin-2(1H)-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	C			1988SRc (66803)	2608
							K(FeL2+L=FeL3)=8.7 K(FeL3=FeL(OH)2+2L+2H)=-25.1		

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
Fe+++	sp	NaCl04	25°C	1.00M	U			1976MPa (66862)	2609
							K(Fe+H2L=FeL+2H)=2.84		

C9H14O7P2 H5L CAS 147608-61-5 (7128)
Hydroxy-4-methylbenzene-2,6-di(methylphosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KNO3	20°C	1.0M	U			1995AAa (67368)	2610
							K(Fe+H2L)=12.05		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		B2=18.90 B(FeH-3L)=-5.59 B(FeH-1L2)=13.38 B(FeH-2L2)=6.68	2002GKc (67376)	2611

C9H15NO6S H3L DCMM CAS 72306-91-3 (8239)
Dicarboxymethyl-N,N-methionine acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++ gl NaCl 25°C 0.50M C 1980Mfc (67471)2612
K(Fe+HL)=10.98

Additional methods: conductivity, spectrophotometry

C9H16O2 HL CAS 18362-64-6 (1134)
2,6-Dimethyl-3,5-heptanedione; (CH3)2.CH.CO.CH2.CO.CH(CH3)2

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

Fe+++ sp NaCl04 25°C 0.5M C K1=12.7 1998BLa (67744)2613

C9H16O2 L CAS 107803-05-4 (1437)
Nonane-2,4-dione; CH3COCH2CO(CH2)4CH3

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

Fe+++ sp NaCl04 25°C 0.5M C K1=11.5 1998BLa (67753)2614

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

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

Fe+++ gl KCl 25°C 0.20M C K1=19.13 1999FEa (67938)2615
B(Fe2L3)=56.0

Fe+++ gl NaNO3 25°C 0.10M C K1=20.08 1989EHa (67939)2616

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

Fe+++ gl KNO3 25°C 1.00M U K1=29.6 1990BSd (68318)2617

Fe+++ gl KCl 25°C 1.0M U K1=29.6 1984KMa (68319)2618

C10H6N2O HL CAS 6759-78-0 (3316)
5-Cyano-8-hydroxyquinoline;

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

Fe+++ EMF diox/w 25°C 50% U 1958TWb (68439)2619

B3=29.8

Medium: 50% dioxan, 0.3 M NaCl

C10H7NO2 HL CAS 2598-30-3 (3317)
5-Formyl-8-hydroxyquinoline;

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

Fe+++ dis NaClO4 25°C 4.0M C K1=7.7 B2=14.40 1985IIa (69148)2628
B3=19.8

$K(\text{Fe}+3\text{HL}(\text{org})=\text{FeL}_3(\text{org})+3\text{H})=2.3$. Values for K_1 , B_2 , B_3 are approximate.

C10H8N2 L 2,2'-Bipyridyl CAS 366-18-7 (25)
2,2'-Bipyridine; (C5H4N)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++ g1 NaNO3 25°C 0.10M C M 2002MDa (69572)2629

$$\begin{aligned} K(\text{Fe}+\text{L}+\text{B}(\text{OH})_4=\text{FeL}(\text{H}_2\text{BO}_4)+2\text{H}) &=14.39, & K(2\text{Fe}+2\text{L}+\text{B}(\text{OH})_4=\text{Fe}_2\text{L}_2(\text{BO}_4)+4\text{H}) &=24.06, \\ K(\text{Fe}+2\text{L}+\text{B}(\text{OH})_4=\text{FeL}_2(\text{H}_2\text{BO}_4)+2\text{H}) &=21.28, & K(2\text{Fe}+4\text{L}+\text{B}(\text{OH})_4=\text{Fe}_2\text{L}_4(\text{BO}_4)+4\text{H}) &=36.78 \end{aligned}$$

Fe+++	g1	NaNO3	25°C	0.10M	C	K1=9.13	B2=18.11	2002MDa	(69573)2630
						B(FeH-1L)=6.96			
						B(FeH-2L)=5.11			
						B(FeH-1L2)=14.74			
						B(FeH-2L2)=10.76			

Fe+++ sp KNO3 22°C 2.8M U T K1=-0.43 1976RAa (69574)2631

Fe+++ gl oth/un 20°C var U 1962ANc (69575)2632
K(2Fe+4L=Fe2(OH)2L4+2H)=16.29

C10H8N2O2 HL (3318)
8-Hydroxyquinoline-5-carbaldehyde oxime

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++ EMF diox/w 25°C 50% U B3=34.0 1958Twb (69685)2633

Medium: 50% dioxan, 0.3 M NaCl

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++ sp NaClO4 ? 0.10M U K1=20.85 B2=36.15 1969ZSb (69769)2634
K3=9.8

$$K(\text{Fe} + \text{H}_2\text{L} = \text{FeL} + 2\text{H}) = -1.15$$
$$K(\text{FeL} + \text{H}_2\text{L} = \text{FeL}_2 + 2\text{H}) = -6.5$$
$$K(\text{FeL}_2 + \text{H}_2\text{L} = \text{FeL}_3 + 2\text{H}) = -12.0$$

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
Fe+++	gl	NaCl04	25°C	0.10M	C		K1=19.84 B2=34.95 K(FeL+L+2H)=19.3 K(FeL2+OH)=6.4	1977Bmd	(69808)2635

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	C		K1=18.10 B2=30.50 K3=8.00	1980NSe	(69843)2636

Fe+++	sp	NaCl04	?	0.10M	U		K1=19.5 B2=33.65 K3=9.8 K(Fe+H2L=FeL+2H)=-0.75 K(FeL+H2L=FeL2+2H)=-6.05 K(FeL2+H2L=FeL3+2H)=-10.5	1969ZSb	(69844)2637
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Fe+++	sp	KCl	20°C	0.10M	U		K1=19.88 B2=34.35 B3=44.22	1952HSb	(69845)2638
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C10H8O7S2 H3L CAS 1330-52-5 (3904)
2-Hydroxynaphthalene-3,6-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	25°C	?	U		K(?)=8.8	1962BAa	(69878)2639

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
Fe+++	sp	NaCl04	20°C	0.2M	M	IH	K1=17.01	1995LHa	(69944)2640

In 50% EtOH: K1=19.70

Fe+++	gl	NaNO3	25°C	0.10M	U		K1=20.6 B2=33.50	1990Hwa	(69945)2641
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K1 by spectrophotometric methods.

Fe+++	sp	oth/un	25°C	0.10M	U		K(FeOH+L)=3.31 K(FeOH+2HL)=3.33	1969NBc	(69946)2642
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Fe+++	vlt	oth/un	?	1.0M	U		K1=22.8	1960BEa	(69947)2643
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Fe+++	sp	oth/un	20°C	0.20M	U		K1=23.10 B2=36.86	1959S0d	(69948)2644
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Medium: 0.2 M hexamethylenetetramine

$$K(\text{Fe}+\text{HL}=\text{FeL}+\text{H})=3.67(?)$$

C10H9N3OS HL CAS 1823-44-5 (4780)
2-(2'-Thiazolylazo)-4-methylphenol; CH3.C6H3(OH).N:N.C3H3NS

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	vlt	oth/un	25°C	0.7M	C			2000CJa (70347)	2652
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$$B_{2\text{eff}}=22.4$$

Method: cathodic stripping voltammetry. Medium: seawater buffered to pH 8.0 (5 mM EPPS). $B_{2\text{eff}}$: $\text{Fe}+2\text{L}'=\text{Fe}(\text{L}')_2$. $K(\text{Fe}'+2\text{L}')=12.4$.

C10H10N02Cl HL CAS 6144-11-0 (247)
Acetoacet-2-chloroacetanilide; CH3.CO.CH2.CO.NH.C6H4.Cl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	diox/w	30°C	50%	U	I	K1=11.46	1972TSe (70492)	2653
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75% dioxan: K1=13.27

C10H10N2O3S H2L CAS 76045-30-2 (7218)

Desferri-ferrithiocin,
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
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Fe+++	sp	KCl	25°C	0.10M	C		B2=31.04	1996LHa (70560)	2654
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Fe+++	gl	KNO3	25°C	0.10M	C		B2=29.6	1990ARa (70561)	2655
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C10H10O2 HL Benzoylacetone CAS 93-91-4 (197)
1-Phenylbutane-1,3-dione; C6H5.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	alc/w	25°C	75%	C		K1=11.14 B2=20.08 B3=22.8	1998ERa (70726)	2656
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Medium: 75% v/v EtOH/H2O, 0.10 M KCl

Fe+++	dis	NaClO4	25°C	4.0M	C	I		1986SIc (70727)	2657
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$$K(\text{Fe}+3\text{L}=\text{FeL}_3(\text{org}))=36.0$$

Method: distribution from 4.0 M NaClO4 into CCl4.

Using MIBK, $K(\text{Fe}+3\text{L}=\text{FeL}_3(\text{org}))=37.7$

Fe+++	dis	NaClO4	25°C	4.0M	C		K1=11.4 B2=20.80 B3=26.7	1985IIa (70728)	2658
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Method: extraction into CCl4; analysis by spectrophotometry.

$K(\text{Fe}+3\text{HL}(\text{org})=\text{FeL}_3(\text{org})+3\text{H})=0.3$. Values for K1, B2, B3 are approximate.

Fe+++	vlt	non-aq	25°C	100%	U		K1=13.8 B2=26.50	1969INb (70729)	2659
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K3=10.9

Medium: 0.1(C₂H₅)₄NCl, HCON(CH₃)₂

C₁₀H₁₀O₃ HL Mellein CAS 1200-93-7 (7616)

Mellein;

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

Fe+++ sp NaClO₄ 25°C 0.10M C 1998AGa (70804)2660

K₁eff=3.93

Method: fluorescence. pH=2.6.

C₁₀H₁₀O₄ H₂L CAS 616-75-1 (4700)

Benzylmalonic acid; HOOC.CH(CH₂.C₆H₅).COOH

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

Fe+++ kin NaClO₄ 25°C 0.50M C K₁=7.26 1977CCb (70820)2661

Fe+++ kin NaClO₄ 25°C 0.50M U K₁=7.26 1971CDa (70821)2662

C₁₀H₁₁NOS L (2831)

Acetothioacetanilide; CH₃.CO.CH₂.CS.NH.C₆H₅

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

Fe+++ sp alc/w 25°C 60% U K₁=4.39 1984FNa (70881)2663

Medium: 60% v/v EtOH/H₂O. Data also for 4-Cl-, 4-Br- and 3-Me- analogues

C₁₀H₁₁N₂ L CAS 102-01-2 (250)

Acetoacetanilide; CH₃.CO.CH₂.CO.NH.C₆H₅

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

Fe+++ sp diox/w 30°C 50% U I K₁=12.82 1971TSg (70910)2664

Medium: 50% dioxan, 0.002 M FeCl₃

In 0.002 FeCl₃, 75% dioxan: K₁=12.90

C₁₀H₁₁N₂O₄ H₂L CAS 1137-73-1 (2567)

N-Phenyliminodiethanoic acid; C₆H₅.N(CH₂.COOH)₂

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

Fe+++ sp KNO₃ 20°C 0.10M U K₁=6.78 1975K0a (71002)2665

C₁₀H₁₁N₂O₅ H₃L CAS 100844-86-8 (2108)

N-(2-Hydroxyphenyl)iminodiethanoic acid; HO.C₆H₄.N(CH₂.COOH)₂

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

Fe+++ EMF oth/un ? ? U K1=15.18 1968TRc (71041)2666

C10H12N2O4 HL (6004)
N-Benzyloxycarbonyl glycyl hydroxamic acid; C6H5.CH2.O.CO.NH.CH2.CO.NHOH

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

Fe+++ gl KNO3 25°C 0.10M U K1=11.4 B2=21.5 1987CSb (71301)2667
B3=30.2

B3 obtained by spectrophotometric method.

C10H12O2 HL CAS 7624-24-2 (4702)
2-Hydroxy-4-methylpropiofenone; HO.C6H3(CH3).CO.CH2.CH3

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

Fe+++ gl diox/w 27°C 75% U K1=9.79 B2=15.68 1973KDC (71527)2668
Medium: 75% dioxan, 0.1 M NaClO4

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

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

Fe+++ dis oth/un 25°C 1.0M U K1=13.0 1971MMA (71581)2669
B3=24.77

Fe+++ sp diox/w ? 40% U K1=11.80 B2=22.76 1966SDa (71582)2670
K3=9.54

Medium: 40% dioxan, 0.1 M NaClO4

C10H12O2 HL CAS 499-44-5 (3303)
4-Isopropyltropolone;

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

Fe+++ sp NaClO4 25°C 2.00M U K1=11.55 19640Yc (71631)2671

C10H12O2 HL CAS 672-76-4 (3893)
5-Isopropyltropolone;

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

Fe+++ sp NaClO4 25°C 2.00M U K1=10.64 19620Ua (71639)2672

C10H12O3 H2L CAS 829-20-9 (4703)
2,4-Dihydroxybutyrophenone; (HO)2.C6H3.CO.CH2.CH2.CH3

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

Fe+++ sp NaClO4 ? 0.10M U 1968GDa (71642)2673
K(?)=2.83

C10H12O3 H2L CAS 7053-88-5 (3894)

3-Isopropylsalicylic acid; (CH3)2.CH.C6H3(OH).COOH

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

Fe+++ EMF NaClO4 25°C 0.10M U 1966PAb (71647)2674

K(Fe+HL=FeL+H)=2.56

C10H12O4 HL CAS 90-24-4 (4704)

2-Hydroxy-4,6-dimethoxyacetophenone; (HO)(CH3O)2.C6H2.CO.CH3

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

Fe+++ gl diox/w 27°C 75% U K1=11.49 B2=22.47 1973KDc (71664)2675

K3=9.84

Medium: 75% dioxan, 0.1 M NaClO4

C10H13NO2 H2L CAS 39775-68-5 (4744)

2-Hydroxybutyrophenone oxime; HO.C6H4.C(:N.OH).CH2.CH2.CH3

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

Fe+++ sp NaClO4 ? 0.10M U 1968GDa (71714)2676

K(?)=3.09

C10H13NO3 H3L (4745)

2,4-Dihydroxybutyrophenone oxime; (HO)2.C6H3.C(:N.OH).CH2.CH2.CH3

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

Fe+++ sp NaClO4 ? 0.10M U 1968GDa (71723)2677

K(?)=3.04

C10H13NO3 H2L Salicyl-alanine CAS 57471-91-7 (6944)

2-(N-(2-Hydroxybenzyl))aminopropanoic acid; HO.C6H4.CH2.NH.CH(CH3)COOH

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

Fe+++ sp NaClO4 25°C 0.10M U K1=18.56 19940Ia (71736)2678

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

Fe+++ gl KNO3 25°C 0.10M C B2=28.60 2002SGb (71756)2679

B3=36.78

B(FeHL)=19.83
B(FeHL2)=32.69
B(FeH2L2)=35.89

C10H14N2O L CAS 7006-13-5 (4746)
N,N-Diethylpicolinamide; C5H4N.CO.N(CH2.CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	oth	oth/un	0°C	?	U		K1=1.0 B2=1.80	1971KAc (72069)	2680
Method: freezing point depression									

C10H14N2O3 H2L CAS 157198-10-2 (6943)
2-(N-(2-Hydroxybenzoyl))-amino-N'-hydroxypropanamide, salicyl-alanine hydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	U		K1=23.17 K(Fe+HL)=10.29 K(Fe+H3L=FeH2L+H)=1.50	19940Ia (72076)	2681

C10H14O2 H2L CAS 58979-61-8 (1188)
4-Butyl-1,2-dihydroxybenzene; (C4H9).C6H3.(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	1.00M	U		K1=2.36 K(Fe+H2L=FeL+2H)=-1.64	1976MPa (72612)	2682

C10H15NO L Ephedrine CAS 299-42-3 (1836)
(1-Methylaminoethyl)benzyl alcohol; C6H5.CH(OH)CH(CH3)NHCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	.058M	U T		K1=3.68 B2=6.87	1961SMa (72644)	2683
At 0 C: K1=4.00, B2=7.46; 45 C: K1=3.37									

C10H15N3O8 H3L CAS 43068-75-3 (2463)
Triglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO-Gly-Gly-OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		K1=10.01 K(FeL+H)=2.00	1974MMb (72717)	2684

C10H16N2O8 H4L EDDS CAS 52759-67-8 (1100)
1,2-Diaminoethane-N,N'-di-1,4-butanedioic acid; (CH2.NH.CH(COOH)CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	NaCl	25°C	0.10M	C	K1=20.6 K(Fe(OH)L+H)=7.9 K(Fe(OH)2L+H)=9.9	20020Ha (73131)2685
Ligand is [S,S] isomer.							
Fe+++	EMF	NaClO4	25°C	0.10M	U	K1=22.7 K(Fe+HL)=15.0	1985PLb (73132)2686
Fe+++	gl	KNO3	30°C	0.10M	U	K1=15.45	1971TSc (73133)2687
Fe+++	oth	KNO3	20°C	0.10M	U	K1=21	1968MJa (73134)2688
Fe+++	sp	KNO3	20°C	0.10M	U	K1=22.0	1966MSg (73135)2689

C10H16N2O8		H4L	EDTA		CAS 60-00-4 (120)		
1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestic acid;							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values Reference ExptNo
Fe+++	oth	oth/un	20°C	0.7M	C	T	2003SHb (73766)2690
K1eff=7.08 (pH=8.2) K1eff=5.46 (pH=8.8)							
Medium: Uv-treated seawater. Method: adsorption of 59Fe-labelled Fe(OH)n species from EDTA solution onto C18/silica. At 10 C, K1eff=7.14 (pH 8.11).							
Fe+++	cal	NaNO3	25°C	0.5M	U	K1(FeL+ox=FeLox)=2.44; DH1=-13.47 kJ/mol	2000KPb (73767)2691
Ox - oxalate							
Fe+++	gl	NaNO3	25°C	0.5M	U	K(FeL+ox=FeLox)=2.44	2000PKb (73768)2692
Ox - oxalate							
Fe+++	EMF	KNO3	25°C	0.10M	C	K1=25.10 K(FeL+H)=1.88 K(Fe(OH)L+H)=7.53	1997DFa (73769)2693
Fe+++	gl	R4N.X	25°C	0.10M	C	K1=24.95 K(Fe(OH)L+H)=7.41	1997DQa (73770)2694
Medium: Me4NNO3							
Fe+++	sp	alc/w	25°C	75%	U	K1=26.3 K(FeL+H)=1.49 *K(FeL)=-7.42	1991CMc (73771)2695
Medium: 75% v/v EtOH/H2O							
Fe+++	gl	NaCl	25°C	3.0M	C	*K(FeL)=-7.20	1989MDa (73772)2696

Fe+++ gl NaCl04 25°C 1.00M C 1983AHa (73773)2697
K(FeL+H)=0.52

Additional method: spectrophotometry.

Fe+++ sp NaCl04 20°C 0.10M U B2=19.34 1977KSa (73776)2700

Fe+++ ISE KN03 25°C 0.50M C 1975VDA (73778)2702
K1eff=12.80 (pH 2.5)

Fe+++ vlt oth/un 20°C 0.20M U T K1=25.42 1972B0a (73779)2703
K1(10 C)=25.75, K1(30 C)=25.11, K1(40 C)=24.85

Fe+++ EMF NaClO₄ 20°C 0.10M U I K₁=25.1 1967BAC (73781)2705
K(FeL+H)=1.2
K(FeL+OH)=6.50

Fe+++ sp KNO3 ? ? U 1967LUa (73782)2706
K(FeL+H+SCN)=1.20

Fe+++ sp NaCl04 25°C 1.0M U 1965BRc (73784)2708
K(Fe+HL)=15.2
K(FeL+OH)=7.1

Fe+++	gl	KCl	25°C	1.0M	U T H	1963GMc (73785)2709
						K(FeLOH+H)=7.58
						K(2(FeLOH)=(FeLOH)2)=2.95
						K((FeLOH)2+2H=2FeL)=12.21

$K(\text{FeLOH}+\text{H})=7.97(0.4 \text{ } ^\circ\text{C}), 7.80(13.7 \text{ } ^\circ\text{C}), 7.11(42.4 \text{ } ^\circ\text{C}), \text{DH}=-42 \text{ kJ mol}^{-1}, \text{DS}=8;$
 $K(\text{dimer})=3.23, 3.24, 2.18; \text{DH}=-63, \text{DS}=-151; K(\text{FeL}(\text{OH})_2+2\text{H})=12.71, 12.37, 12.04$

Fe+++ dis NaClO4 20°C 0.10M U 1963STc (73786)2710
K(Fe+L+OH)=34.0

Medium: KClO4

Fe+++ sp none 20°C 0.0 U K1=24.23 1960BGd (73787)2711
K(Fe+HL)=15.26
K(Fe+H2L)=8.72

Fe+++ sp oth/un 20°C 0.0 U K1=24.23 1959BGa (73788)2712
K(Fe+H2L)=8.70

Fe+++ gl KNO3 25°C 0.10M U K1=25.1 1959SCc (73789)2713
K(FeLOH+H)=7.4
K(FeLOH+OH)=4.53
K(FeL(OH)2+OH)=1.5

Fe+++ ix oth/un 25°C 1.0M U K1=24 1952JLa (73790)2714

Fe+++ vlt NaNO3 25°C 1.0M U K1=25.7 1952KAa (73791)2715

Fe+++ EMF KCl 20°C 0.10M U T K1=25.1 1951SHa (73792)2716
K(Fe+HL)=16.2
K(FeLOH+H)=7.49
K(FeL(OH)2+H)=9.41

C10H17N05 H2L CAS 6243-06-7 (3326)
N-(2-Hydroxycyclohexyl)iminodiethanoic acid; HO.C6H10.N(CH2.COOH)2

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

Fe+++ EMF KCl 20°C 0.10M U K1=12.94 1964PCa (74988)2717
K(Fe(OH)L+H)=2.43
K(Fe(OH)2L+H)=5.95

C10H17N306S H3L Glutathione CAS 70-18-8 (333)
Glutamyl-cysteinyl-glycine;

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

Fe+++ kin NaClO4 25°C 0.10M C 1976KLb (75119)2718
Keff(Fe(OH)+H3L)=3.49

Method: stopped flow spectrophotometry. Medium pH 1-3.

By spectrophotometry, Keff=3.48.

C10H18N204 H2L CAS 124125-60-6 (914)
1,5-Diazacyclooctane-N,N'-diethanoic acid;

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

Fe+++ gl NaNO3 25°C 0.10M U K1=14.43 1990HNa (75203)2719

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

Fe+++ gl NaClO4 25°C 1.0M M 1977KSc (75390)2720
 K(2FeL(H2O)=LFeOFeL+2H)=-5.84
 K(2FeL(OH)=LFeOFeL+H2O)=2.38

Fe+++ sp none 25°C 0.0 U M 1977Y0a (75391)2721
 K(FeL+SCN)=1.2
 K(FeL+CH3COO)=1.7
 K(FeL+Cl)=0.2
 K(FeL+Br)<0.2

Fe+++ sp oth/un 20°C ? U K1=19.06 1967KAe (75392)2722

Fe+++ gl KCl 25°C 1.0M U 1963GMc (75393)2723
 K(Fe(OH)L+H)=4.11
 K(2FeL=(Fe(OH)L)2+2H)=-5.84
 K(2Fe(OH)L=(Fe(OH)L)2)=-2.38
 K(Fe(OH)2L+H)=8.69

Fe+++ gl KNO3 25°C 0.10M U K1=19.8 1959SCc (75394)2724
 K(FeLOH+H)=3.88
 K(FeLOH+OH)=4.95
 K(FeL(OH)2+OH)=3.78

C10H18N4O6 H2L (4504)
 Hexanoic acid bis(3-hydroxycarbamoyl-methyl)amide; HONHCOCH2NHCO(CH2)4CONHCH2CONHOH

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

Fe+++ gl KCl 25°C 0.20M C K1=17.9 1999FEa (75568)2725
 B(Fe2L3)=51.6

C10H18N4O8 H4L CAS 35048-92-5 (4751)
 Ethylenedinitrilo-N,N'-diacetohydroxamic-N,N'-diethanoic acid;

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

Fe+++ gl KNO3 25°C 0.10M U 1971MMe (75583)2726
 K(Fe+H2L)=10.80
 K(FeL+H)=4.60
 K(FeHL+H)=2.98
 K(Fe(OH)L+H)=8.07

C10H20N2O4 H2L CAS 58534-57-9 (2113)

Hexamethylenediamine-N,N-diethanoic acid; $\text{H}_2\text{N}(\text{CH}_2)_6.\text{N}(\text{CH}_2.\text{COOH})_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	U			K1=18.79	1977Tia (75776)	2727

C10H20N2O4		H2L						(6924)		
N,N'-Dihydroxy-N,N'-dimethyloctanediamide; $\text{CH}_3\text{N}(\text{OH}).\text{CO} . (\text{CH}_2)_6 . \text{CO} . \text{N}(\text{OH})\text{CH}_3$										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	kin	NaClO4	25°C	2.00M	C				1994CCa (75789)	2728
								$\text{K}(\text{Fe}+\text{H}_2\text{L}=\text{FeHL}+\text{H})=4.85$		
								$\text{K}(\text{FeL}+\text{H}=\text{FeHL})=1.3$		
								$\text{K}(\text{Fe}_2\text{HL}_2+\text{H}=2\text{FeHL})=1.80$		
								$\text{K}(\text{Fe}_2\text{L}_2+\text{H}=\text{Fe}_2\text{HL}_2)=-0.097$		

C10H20N2O4		H2L						CAS 5578-84-7	(5914)	
N,N-Dihydroxydecanediamide; $\text{HN}(\text{OH}).\text{CO} . (\text{CH}_2)_8 . \text{CO} . \text{NH}(\text{OH})$										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	kin	NaClO4	25°C	2.00M	C				1994CCa (75799)	2729
								$\text{K}(\text{Fe}+\text{H}_2\text{L}=\text{FeHL}+\text{H})=6.23$		
								$\text{K}(\text{FeL}+\text{H}=\text{FeHL})=0.11$		

Fe+++	gl	NaNO3	25°C	0.10M	C			K1=20.30	1989EHa (75800)	2730

C10H20N2O6		H2L						CAS 96817-35-5	(4755)	
1,2-Diaminoethane-N,N'-bis(4-hydroxy-2-butanoic acid);										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	oth/un	20°C	0.10M	U				1972DKa (75846)	2731
								$\text{K}(\text{FeOH}+\text{L})=14.12$		
								$\text{K}(\text{FeOHL}+\text{OH})=7.60$		

C10H20N2O6		H2L						CAS 5616-21-7	(570)	
N,N'-Bis(2-hydroxyethyl)diaminoethane-N,N'-diethanoic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	oth/un	30°C	0.10M	U			K1=<15	1953CBa (75856)	2732
								$\text{K}(\text{FeLOH}+\text{H})=2.2$		

C10H20N4O4		H2L						CAS 475984-27-1	(6717)	
Piperazine-1,4-bis(N-methylacetohydroxamic acid); $\text{C}_4\text{H}_8\text{N}_2(\text{CH}_2.\text{CO} . \text{N}(\text{OH})\text{CH}_3)_2$										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++ sp KNO3 25°C 0.10M U 1993SEa (75895)2733

B(Fe2L3)=61.7

By competition with EDTA. By voltammetry, for Fe(II): B(Fe2HL3)=32.6.

C10H20N6O8 H4L CAS 38932-78-4 (4756)

1,2-Diaminoethane-N,N,N',N'-tetraacethydroxamic acid;

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

Fe+++ sp NaClO4 20°C 0.10M U K1=25.6 1972KMc (75901)2734

K(Fe+HL)=20.5

K(Fe+H3L)=12.67

K(Fe+H4L)=9.92

K(FeL+OH)=4.90

K(FeLOH+OH)=3.30

C10H20O5 L 15-Crown-5 CAS 33100-27-5 (576)

1,4,7,10,13-Pentaoxacyclopentadecane; cyclo(-(O.CH2.CH2)5-)

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

Fe+++ con mixed 25°C 90% C K1=2.78 2003ISa (76002)2735

Medium: 90% v/v DMSO/H2O.

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

Fe+++ gl R4N.X 25°C 0.05M U K1=13.0 1999BDb (76316)2736

Medium: Et4NClO4

C10H24N4 L Cyclam CAS 295-37-4 (8)

1,4,8,11-Tetraazacyclotetradecane; cyclo(-(HN.CH2.CH2.NH.(CH2)3)2-)

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

Fe+++ gl KCl 25°C 0.50M M K1=24.1 2001BYb (76665)2737

C10H25N5 L 15-Ane-N5 CAS 295-64-7 (99)

1,4,7,10,13-Pentaazacyclopentadecane; cyclo(-(HN.CH2.CH2)5-)

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

Fe+++ gl none RT 0 U 1998ZBb (76733)2738

*K1(FeLC12)=-3.46

*K2(FeLC12)=-7.31

C10H25N5 L CAS 155115-12-1 (8660)

12-Methyl-1,4,7,10-tetraazacyclotridecan-12-amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.50M	M		K1=27.6	2001BYb (76744)	2739

C10H26N2O12P4		H8L					CAS 28698-30-8	(3342)	
N,N,N',N'-Tetra(phosphomethyl)cyclohexane-1,2-diamine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	oth/un	25°C	0.10M	U		K1=23.31	1959BYa (76758)	2740

C11H7NO5		H2L					CAS 14461-79-1	(4825)	
4-Nitro-2-hydroxy-3-naphthoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	?	U			1968ACa (76903)	2741
							K(Fe+3HL)=7.54		

C11H7O3Br		H2L					CAS 2208-15-3	(4824)	
4-Bromo-3-hydroxy-2-naphthoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	100%	U			1968ACa (76910)	2742
							K(Fe+3HL)=8.33		

C11H8O3		H2L					CAS 86-48-6	(1129)	
1-Hydroxy-2-naphthoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	20°C	50%	U T		K1=4.27	1971PSb (77010)	2743
Medium: 50% EtOH. 0.1 M NaClO4. K1(25 C)=4.20, K1(30 C)=4.15, K1(40 C)=4.02									
I=0: K1=4.47									

C11H8O3		H2L					CAS 2083-08-1	(1131)	
2-Hydroxy-1-naphthoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	30°C	0.10M	U T			1972PSa (77061)	2744
							K(Fe+2HL)=7.83		
K(20 C)=8.01, K(40 C)=7.67, K(50 C)=7.51. I=0: K(Fe+2HL)=8.02									

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

Fe+++ sp oth/un 30°C ? U 1966GSf (77122)2745
K(Fe+HL=FeL+H)=5.01(?)

C11H804 HL CAS 7555-37-5 (4812)
3-Acetyl-4-hydroxycoumarin

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

Fe+++ gl diox/w 35°C 50% U K1=5.11 B2=9.70 1971MAa (77176)2746
Medium: 50% dioxan, 0.01 M NaClO4

C11H805 H2L CAS 5112-55-0 (1132)
7-Hydroxy-4-methyl-coumarin-6-carboxylic acid;

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

Fe+++ sp alc/w 30°C 50% U K1=10.43 1975PTa (77216)2747

C11H806S 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

Fe+++ gl NaClO4 25°C 0.10M U K1=15.85 B2=26.81 1981LAa (77225)2748
B3=34.05

Fe+++ gl NaClO4 25°C 0.10M C K1=14.04 B2=24.92 1979LPd (77226)2749
B3=32.29

K1 measured by spectrophotometry

C11H806S 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

Fe+++ sp NaClO4 25°C 0.10M U K1=15.85 B2=27.43 1981LAa (77239)2750
B3=34.11

Using pH titrations, K1=14.69, B2=24.40

C11H806S 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

Fe+++ sp NaClO4 25°C 0.10M C K1=14.57 B2=25.24 1981LAb (77251)2751
B3=33.58

C11H809S2 H4L CAS 67097-84-1 (1995)
1-Hydroxy-4,7-disulfo-2-naphthoic acid;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  NaClO4 25°C 0.10M U      K1=14.69 B2=24.74 1981LAa (77279)2752
*****
C11H8O9S2      H4L      CAS 67097-83-0 (1618)
3-Hydroxy-5,7-disulfo-2-naphthoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  NaClO4 25°C 0.10M C      K1=14.05 B2=23.77 1981LAb (77295)2753
                        B3=32.03
*****
C11H9NO2      HL      CAS 92609-55-3 (4827)
5-Acetyl-8-hydroxyquinoline;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  diox/w 25°C 60% U      1973SCd (77330)2754
                        B3=31.38
Medium: 60% dioxan, 0.1 M NaClO4
*****
C11H9NO4      H2L      CAS 4321-82-7 (4829)
3-Acetyl-4-hydroxycoumarin oxime;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  diox/w 35°C 50% U      1971MAa (77419)2755
                        K(Fe+HL)=4.82
                        K(Fe+2HL)=8.79
Medium: 50% dioxan, 0.01 M NaClO4
*****
C11H11NO6      H3L      CAS 1147-65-5 (425)
N-(2'-Carboxyphenyl)iminodiethanoic acid; HOOC.C6H4.N(CH2.COOH)2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  NaNO3 20°C 0.10M U      1960DSa (77827)2756
                        K(?)=9.62
*****
C11H11N2O2Br      HL      (9228)
3-[4-Bromophenylazo]penta-2,4-dione;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  alc/w 25°C 0.1M U      K1=8.53      2004GMc (77875)2757
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture
*****
C11H11N2O2Cl      HL      (9229)
3-[4-Chlorophenylazo]penta-2,4-dione;
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	0.1M	U		K1=8.37	2004GMc (77888)	2758
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture									

C11H11N2O2I		HL					(9227)		
3-[4-Iodophenylazo]penta-2,4-dione;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	0.1M	U		K1=8.67	2004GMc (77899)	2759
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture									

C11H11N3O4		HL					(9230)		
3-[4-Nitrophenylazo]penta-2,4-dione;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	0.1M	U		K1=8.02	2004GMc (77959)	2760
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture									

C11H12N2O2		HL		Tryptophan			CAS 73-22-3 (3)		
2-Amino-3-(3-indolyl)propanoic acid; H2N.CH(CH2.C8H6N)COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaClO4	20°C	1.0M	U	T	K1=9.0	1958PEd (78205)	2761

C11H12N2O2		HL					(9226)		
3-[Diphenylazo]penta-2,4-dione;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	0.1M	U		K1=9.10	2004GMc (78250)	2762
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture									

C11H12N2O5S		HL					CAS 56475-09-3 (8410)		
3-(4'-Sulfophenylhydrazo)-pentane-2,4-dione;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	U	T	K1=8.43	2005ACa (78319)	2763
For 35 C K1=8.20; for 45 C K1=7.96									

C11H13NOS		L					CAS 67077-39-8 (6233)		
Aceto-4-methylphenylthioamide; CH3.CO.CH2.CS.NH.C6H4.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

Fe+++ sp alc/w 25°C 60% U K1=4.53 1984FNa (78444)2764

C11H13NO2 HL CAS 3026-99-1 (249)
Acetoacet-2-toluidide; CH3.CO.CH2.CO.NH.C6H4.CH3

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

Fe+++ sp diox/w 30°C 50% U K1=12.56 1972TSe (78465)2765
In 75% dioxan: K1=14.18

C11H13NO2S L CAS 72369-82-5 (6232)
Aceto-4-methoxyphenylthioamide; CH3.CO.CH2.CS.NH.C6H4.OCH3

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

Fe+++ sp alc/w 25°C 60% U K1=4.65 1984FNa (78479)2766

C11H13NO3 HL CAS 91099-10-4 (246)
Acetoacet-2-anisidide; CH3.CO.CH2.CO.NH.C6H4.OCH3

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

Fe+++ sp diox/w 30°C 50% U K1=12.43 1972TSe (78521)2767
In 75% dioxan: K1=14.35

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

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

Fe+++ gl KNO3 25°C 0.10M C K1=22.4 1975HMB (78624)2768

C11H13NO6 H4L CAS 1911-59-2 (4852)
2,3-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

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

Fe+++ EMF oth/un ? ? U 1975DTa (78662)2769

K(Fe+HL)=17.6

C11H13NO6 H4L CAS 59036-09-8 (2111)
2,5-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

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

Fe+++ gl oth/un 25°C 0.0 U 1970TTb (78677)2770

K(Fe+HL)=17.7

C11H13NO6 H4L CAS 31477-66-7 (4853)
2,6-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	oth/un	?	?	U		K(Fe+HL)=17.0	1975DTa (78691)	2771

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
Fe+++	gl	KNO3	25°C	0.10M	C		B2=28.79 B3=37.01 B(FeHL)=19.62 B(FeHL2)=33.12 B(FeH2L2)=36.45	2002SGb (79036)	2772

C11H18N2O8		H4L		PDTA			CAS 4408-81-5 (1655)		
1,2-Diaminopropane-N,N,N',N'-tetraethanoic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	20°C	1.0M	U		K(FeL+H)=1.25 K(FeL+OH)=6.95	1986HZa (79284)	2773

C11H18N2O8		H4L					CAS 4408-81-5 (923)		
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOCH2)2N.CH2.)2.CH2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaClO4	20°C	0.10M	U		K1=21.4 K(FeL+H)=2.4	1967BAc (79442)	2774

Fe+++	gl	KNO3	20°C	0.10M	U		K(FeL+H)=2.45	1964LAa (79443)	2775
By redox: K1=21.61									

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
Fe+++	gl	KNO3	25°C	0.10M	U		K1=17.2	1971KRa (79551)	2776

Fe+++	sp	oth/un	25°C	?	U		K1=16.6	1971KRa (79552)	2777

Fe+++	gl	KNO3	25°C	0.10M	U		K(Fe(OH)L+H)=4.55 K(Fe(OH)2L+H)=9.30	1971KRa (79553)	2778

Fe+++	sp	oth/un	25°C	? U				1971KRa (79554)2779
B(Fe2L)=21.3								
Fe+++	sp	KN03	20°C	0.10M U		K1=19.68		1967SMf (79555)2780
Fe+++	oth	KN03	20°C	0.10M U		K1=>18		1965JMb (79556)2781
Method: electrophoresis								

C11H2002		HL		Dipivaloylmeth.	CAS 1118-71-4	(363)		
2,2,6,6-Tetramethyl-3,5-heptanedione; (CH3)3C.CO.CH2.CO.C(CH3)3								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Fe+++	sp	NaCl04	25°C	0.5M C			K1=14.1	1998BLa (79747)2782
Fe+++	gl	NaCl04	25°C	0.50M U			K1=14.1	1990HMb (79748)2783

C11H21N305		H2L			CAS 499238-77-6	(8837)		
N-Hydroxy-N'-[4-(hydroxymethylamino)-4-oxobutyl]-N-methylpentanediamide;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Fe+++	gl	KCl	25°C	0.20M C			K1=19.84	2002FBb (79794)2784
B(Fe2L3)=58.99								
K1 determined by spectrophotometry.								

C11H22N204		L			CAS 90149-53-4	(5532)		
N,N'-Dihydroxy-N,N'-diisopropylpentanediamide;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Fe+++	gl	KN03	25°C	0.10M C			K1=22.84	1984BHa (79828)2785
B(Fe2L3)=62.1								

C11H22N204		H2L				(6923)		
N,N'-Dihydroxy-N,N'-dimethylnonanedi- amide; CH3N(OH).CO.(CH2)7.CO.N(OH)CH3								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Fe+++	kin	NaCl04	25°C	2.00M C				1994CCa (79829)2786
K(Fe+H2L=FeHL+H)=4.30								
K(FeL+H=FeHL)=0.85								

C11H22N404		H2L				(6756)		
1,4-Diazacycloheptane-N,N'-bis(N-methyl-acetohydroxamic acid);								
C5H10N2(CH2.CO.N(OH)CH3)2								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo

Fe+++ sp KNO3 25°C 0.10M C 1993SEb (79843)2787
B(Fe2L3)=65.4

Method: competitive reaction with EDTA

C12H6O2Cl4S H2L CAS 97-18-7 (4944)
Bithionol; Cl2.C6H2(OH).S.C6H2(OH).Cl2

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

Fe+++ gl alc/w 25°C 75% U K2=11.1 1970FGa (80099)2788
Medium: 75% EtOH, 1.0 M NaClO4

C12H7N3O2 L CAS 4199-88-6 (449)
5-Nitro-1,10-phenanthroline;

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

Fe+++ sp oth/un 25°C 0.0 U 1964LAe (80175)2789
B3=7.46

Fe+++ oth oth/un ? ? U B2=9 1944SRa (80176)2790

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

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

Fe+++ gl NaNO3 25°C 0.10M C M 2002MDa (80445)2791
K(Fe+L+B(OH)4=FeL(H2BO4)+2H)=14.78, K(2Fe+2L+B(OH)4=Fe2L2(BO4)+4H)=25.02,
K(Fe+2L+B(OH)4=FeL2(H2BO4)+2H)=22.82, K(2Fe+4L+B(OH)4=Fe2L4(BO4)+4H)=39.91

Fe+++ gl NaNO3 25°C 0.10M C K1=10.41 B2=19.92 2002MDa (80446)2792
B(FeH-1L)=8.54
B(FeH-2L)=6.43
B(FeH-1L2)=16.43
B(FeH-2L2)=12.52

Fe+++ sp R4N.X 25°C 0.10M U 1988SKb (80447)2793

Kout(FeL3+A)=0.15
Kout(FeL3+B)=1.26
Kout(FeL3+C)=1.85
Kout(FeL3+D)=1.92

A=PF6, B=BF4, C=ClO4, D=CF3SO3. Medium: 0.05-0.2M Bu4N(X) (X=A,B,C,D).

Fe+++ kin alc/w 25°C 80% U I M 1983TYa (80448)2794

Kout(FeL3+ClO4)=1.02
Kout(FeL3+Cl)=1.26
Kout(FeL3+SCN)=1.40

Medium: 80% MeOH. In DMSO, 0.1 KCl: Kout(FeL3+Cl)=1.72, Kout(FeL3+ClO4)=1.59
In H2O: Kout(FeL3+Cl)=0.176, Kout(FeCl3+SCN)=0.414

Fe+++	sp	KNO3	22°C	2.8M	U	T	K1=-1.02	1976RAa (80449)	2795

Fe+++	sol	oth/un	25°C	100%	U	H	Kout(FeA2P+L)=2.43	1974ARb (80450)	2796
Medium: CH2Cl2. DH(Kout)=-32.0 kJ mol-1 and DS(Kout)=-63.0 J mol-1 K-1. A=imidazole, P=deuteroproporphin(IX) dimethyl ester									

Fe+++	sp	oth/un	35°C	0.0	U	H	DH(B3)=-41.4 kJ mol-1, DS=121 J K-1 mol-1	1964LAe (80451)	2797

Fe+++	EMF	oth/un	?	?	U		K1=6.5 B3=23.5	B2=11.4	1962ANc (80452)2798

Fe+++	kin	none	25°C	0.0	U		B3=21.1	1951CLa (80453)	2799

Fe+++	EMF	oth/un	25°C	0.10M	U		B3=14.10	1948LKa (80454)	2800

Fe+++	EMF	oth/un	25°C	1.0M	U	I	B3=15.00	1948LKa (80455)	2801
Method: redox. Medium: 1 M H2SO4. In 8 M H2SO4 B3=20									

C12H10N2O2S HL CAS 104969-73-5 (6086)									
2'-Thienylmethylene-2-iminobenzohydroxamic acid;									

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

Fe+++	oth	mixed	25°C	40%	U		K1=17.45	1986SEa (80715)	2802
Medium: 40% DMF/H2O									

C12H10N4O2 HL CAS 90357-70-3 (6767)									
3-Hydroxyisonicotinaldehyde isonicotinoyl hydrazone									

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

Fe+++	sp	KNO3	25°C	0.10M	U		B2=30.0 K(Fe+H2L=FeH2L)=10.43 K(Fe+2H2L=FeH4L2)=17.4 K(Fe+HL=FeHL)=15.7 K(Fe+2HL=FeH2L2)=23.6	1990VHa (80772)	2803

C12H11N2O4As H3L CAS 54435-90-4 (1105)									
5-Phenylazo-2-hydroxyphenylarsonic acid; C6H5.N:N.C6H3(OH).AsO3H2									

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

Fe+++	sp	oth/un	25°C	0.04M	U	I	K(Fe+HL)=11.43	1974NUb (80859)	2804

K(Fe+HL)=11.31 at 0.08mol dm-3

K(Fe+HL)=11.99 at 0.0

C12H11N3O4S H2L (4003)

3-Hydroxy-3-phenyl-1-(4'-sulfonyl)triazene;

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

Fe+++ sp oth/un 20°C ? U 1960MSa (80939)2805

K(?)=11.62

C12H12O3 H2L CAS 39113-56-9 (794)

1-Phenylhexane-1,3,5-trione; C6H5.CO.CH2.CO.CH2.CO.CH3

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

Fe+++ sp alc/w 25°C 70% C 1991HKd (81156)2806

B(FeHL)=12.30

Medium: 70% v/v MeOH/H2O, 0.5 M NaClO4

C12H13O10S H5L (8082)

3-Bis(N,N-carboxymethyl)aminomethyl-2-hydroxy-5-sulphobenzoic acid;

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

Fe+++ gl KCl 25°C 0.1M U K1=19.5 1978TZa (81326)2807

C12H14N2O6 H2L (4919)

5-Hydroxy-5-(2-hydroxy-4,4-dimethyl-6-oxo-1-cyclohexenyl)barbituric acid;

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

Fe+++ sp KCl 20°C 0.10M U 1968KUa (81345)2808

K(Fe+H2L=FeHL+H)=2.69

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

Fe+++ gl alc/w 25°C 50% C K1=8.57 B2=16.55 1999GAa (81367)2809

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

Fe+++ gl KCl 25°C 0.10M C K1=20.96 1989MMd (81416)2810

K(FeL+2H)=7.78

K(FeH-1L+H)=7.01

B(Fe2H-1L)=22.98

B(Fe2H-2L)=20.26

B(Fe2H-3L)=16.22, B(Fe2H-4L)=11.02, B(Fe2H-5L)=5.06

C12H16N2O4 H2L (5872)
2,3-Dihydroxy-N,N'-dimethylterephthalamide; C6H2(OH)2(CO.N(Me2))2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	C		K1=16.4 B2=30.90 K3=10.9	1989GMb (81583)	2811

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
Fe+++	gl	KNO3	25°C	0.10M	C		K1=9.30 B2=17.29	1988YSc (81810)	2812

C12H18N4O9 H3L CAS 43101-37-7 (2935)
Tetraglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO.Gly-Gly-Gly-OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		K1=9.99 K(FeL+H)=1.89	1974MMb (81951)	2813

C12H20N2O2 H2L CAS 6310-76-5 (3387)
4,4'-Ethylenedi-iminodi(pentan-2-one);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	0.2M	U		K1=9.83	1999MTc (82006)	2814

Medium: 0.2 M KCl in 3:7 v/v H2O/EtOH

C12H20N2O8 H4L CAS 40623-42-5 (1101)
1,2-Diaminoethane-N,N'-di(2-pentane-1,5-dioic acid); (CH2NHCH(COOH)CH2CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	30°C	0.10M	U		K1=15.7	1971TSc (82070)	2815

C12H20N2O8 H3L Mugineic acid CAS 69199-37-7 (9036)
2-Carboxy-a-[(3-carboxy-3-hydroxypropyl)amino]-b-hydroxy-1-azetidinebutanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	20°C	0.10M	U		K1=18.1	1981STc (82247)	2816

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
Fe+++	EMF	KCl	25°C	0.10M	U		K1=28.05 K(FeL(OH)+H)=6.45	1971ISa (82300)	2817

Fe+++	sp	KNO3	20°C	0.50M	U		K1=28.4	1968SKb (82301)	2818
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C12H20N2O8 H4L CAS 22968-57-6 (3992)
meso-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	KCl	25°C	0.10M	U		K1=25.65 K(FeL(OH)+H)=6.17	1971ISa (82395)	2819

Fe+++	sp	KNO3	20°C	0.50M	U		K1=25.0	1968SKb (82396)	2820
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C12H20N2O8S H4L TEDTA CAS 923-74-0 (3394)
2,2'-Thiobis(ethyliminodiethanoic acid); S(CH2.CH2.N(CH2.COOH)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaClO4	20°C	0.10M	U		K1=20.41	1967BAc (82455)	2821
Fe+++	sp	oth/un	19°C	dil	U		K1=20.67 K(Fe+HL)=13.19	1966ZAb (82456)	2822

C12H20N2O9 H4L EEDTA CAS 923-73-9 (2112)
Oxa-bis(ethyleneimino)diethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	NaClO4	20°C	0.10M	U		K1=24.7	1967BAc (82533)	2823

Fe+++	sp	oth/un	19°C	?	U		K1=23.03	1965ZAa (82534)	2824
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C12H20N2O10 H4L CAS 10258-50-1 (3993)
(2,3-Dihydroxytetramethylenedinitrilo)tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	oth	oth/un	?	?	U		B(Fe2L)=32.42	1967Lda (82587)	2825

Method: high-frequency titration

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	C			K1=28.3	1991CMd (82733)	2826

C12H22O11 L alpha-Lactose CAS 5989-81-1 (2486)
4-D-Beta-D-Galactopyranosyl-alpha-D-glucose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.30M	C			K1=2.40	1983ZGa (82874)	2827

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaNO3	20°C	0.10M	C				1994EOa (82928)	2828
								B(FeH-1L)=2.03 K(FeH-1L=FeH-2L+H)=-3.89 K(FeH-2L=FeH-3L+H)=-9.93		

Fe+++	sp	NaCl04	25°C	0.30M	C			K1=4.63 B(FeHL)=8.49 B(Fe2L)=13.02	1983ZGa (82929)	2829
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C12H23N3O5 H2L CAS 499238-78-7 (8836)
N-Hydroxy-N'-[5-(hydroxymethylamino)-5-oxopentyl]-N-methylpentanediamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.20M	C			K1=19.87 B(Fe2L3)=57.53	2002FBb (82984)	2830

K1 by spectrophotometry.

C12H23N3O5 H2L CAS 499238-79-8 (8835)
N-Hydroxy-N'-[6-(hydroxymethylamino)-6-oxohexyl]-N-methylbutanediamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.20M	C			K1=21.05 B(Fe2L3)=61.01	2002FBb (82994)	2831

K1 determined by spectrophotometry.

C12H24N2O4 L CAS 73586-25-1 (5533)
N,N'-Dihydroxy-N,N'-diisopropylhexanediamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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 C12H27N5O2 HL CAS 188985-14-0 (8661)
 13-Amino-13-methyl-1,4,8,11-tetraazacyclotetradecane-6-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.50M	M		K1=26.8	2001BYb (84107)	2839

 C12H27P L CAS 998-40-3 (170)
 Tri-n-butylphosphine; (CH₃.(CH₂)₃)₃P

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	nmr	non-aq	25°C	100%	U			1992LSa (84135)	2840

K(FePAL+L=FePL2+A)=0.70
 K(FePBL+L=FePL2+B)=0.70

Medium: CHCl₃. P=5,10,15,20-tetraphenylporphyrin dianion. A=imidazole.
 B=N-methylimidazole. In acetone, K(FePAL+L=FePL2+A)=0.90

 C12H28N4O2 L CAS 296-36-6 (2472)
 1,10-Dioxa-4,7,13,16-tetraazacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	dis	non-aq	25°C	100%	C I			2004CCa (84233)	2841

K(Fe+A+L(org)=FeAL(org))=19.65

Distribution of FeA₃ from H₂O into CH₂Cl₂. A is nitrate. For the N-tetra-benzyl- derivative, K'=22.71. Distribution into CHCl₃, K=19.96; K'=18.38

 C12H29N5 L CAS 155115-12-1 (7505)
 10-Methyl-10-amino-1,4,8,12-tetraazacyclopentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.50M	M		K1=25.1	2001BYb (84267)	2842

 C12H32N4O12P4 H8L DOTPH CAS 91987-74-5 (229)
 1,4,7,10-Tetraazacyclododecane-N,N',N'',N'''-tetramethylenephosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO ₃	25°C	1.0M	U		K1=23.7	1984KMb (84410)	2843

K(Fe+HL)=19.4

 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
Fe+++	sp	alc/w	25°C	50%	U		K1=13.05	1968GDb (84496)	2844

Medium: 50% EtOH, 0.1 M NaClO4

C13H10N2 L CAS 3003-78-6 (2752)
5-Methyl-1,10-phenanthroline;

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

Fe+++ sp oth/un 25°C 0.0 U 1967LAe (84814)2845
B3=16.77

C13H10N2O6S H2L MordentYellow10 CAS 21542-82-5 (1390)
5-(4'-Sulphophenylazo)salicylic acid; HO3S.C6H4.N:N.C6H3(OH).COOH

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

Fe+++ gl KNO3 25°C 0.10M U K2=10.70 1964MTc (84939)2846

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

Fe+++ vlt non-aq 25°C 100% C 1992SSe (85147)2847
B3=35.3

Medium: acetonitrile, 0.20 M Et4NPF6. Method: cyclic voltammetry.

Fe+++ sp alc/w 25°C 75% U K1=4.63 B2=6.33 1967BMa (85148)2848
B3=5.33

Medium: 75% EtOH, conditional constants

Fe+++ sp NaClO4 25°C ? U K1=11.38 B2=20.65 1967PKa (85149)2849
B3=29.09

Fe+++ sp oth/un ? ? U K1=5.28 1957ARa (85150)2850

C13H11N2O3F3 HL (5563)
3-(2-Acetylphenylhydrazon)-1,1,1-trifluoropentane-2,4-dione;
CF3.CO.C(CO.CH3):N.HN.C6H4.COCH3

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

Fe+++ gl diox/w 25°C 75% U K1=12.50 B2=24.18 1990ASb (85245)2851

C13H11N3O2 HL (4984)
1-Isonicotinyl-2-salicylidene hydrazone; C5H4N.CO.NH.N:CH.C6H4.OH

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

Fe+++ sp KNO3 25°C 0.10M U B2=56 1990VHa (85268)2852
K(Fe+HL)=38.3

K(Fe+2HL)=48.8

K(Fe+HL+L)=54

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-dioxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	mixed	25°C	50%	C		K2=9.4 K3=8.9	2002Mwa (85289)	2853

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

C13H11N3O6S H2L (2811)
1-(2-Carboxy-5-sulfonatophenyl)-3-hydroxy-phenyltriazene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	none	25°C	0.0	U		K1=7.22	1974CHa (85303)	2854

C13H12N2O HL CAS 69067-12-5 (4986)
Benzanilidoxime; C6H5.C(:N.OH).NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.10M	U		K(Fe+HL)=4.03 K(FeHL+HL)=4.15	1969MKd (85335)	2855

C13H14NO3P H2L CAS 19316-85-7 (1466)
2-Hydroxyphenyl-N-phenylaminomethylphosphinic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaClO4	20°C	0.10M	U		K1=7.55	1985SIb (85563)	2856

C13H14N2O L CAS 87413-05-6 (6300)
1-Benzyl-1,4-dihydronicotinamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	U		K(FeP+L)=3.90 K(FePL+L)=2.83	1989FKb (85579)	2857

Medium: CH2Cl2. FeP=tetraphenylporphyrinatoiron(III) perchlorate. For FePCL, K(FeP+L=FePL)=1.41

C13H14N2O3 HL (4940)
3-(2-Acetylphenylhydrazon)pentane-2,4-dione; (CH3.CO)2C:N.NH.C6H4(CO.CH3)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	diox/w	25°C	75%	U			K1=14.50 B2=28.15	1990ASb (85608)	2858

C13H14N3O5P		H2L						CAS 80767-75-5	(1467)	
2-Hydroxy-4-nitrophenyl-N-(2-pyridylmethyl)aminemethylphosphinic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaClO4	20°C	0.10M	U			K1=8.15	1985SIb (85641)	2859

C13H14N3O5P		H2L						CAS 80767-76-6	(1468)	
2-Hydroxy-4-nitrophenyl-N-(3-pyridylmethyl)aminemethylphosphinic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaClO4	20°C	0.10M	U			K1=8.12	1985SIb (85654)	2860

C13H15N02S		L						(6235)		
Diaceto-4-methylphenylthioamide; (CH3.CO)2CH.CS.NH.C6H4.CH3										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U			K1=4.40	1984FNa (85706)	2861

C13H15N03S		L						(6234)		
Diaceto-4-methoxyphenylthioamide; (CH3.CO)2CH.CS.NH.C6H4.0CH3										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U			K1=4.48	1984FNa (85709)	2862

C13H15N203P		H2L						CAS 80767-72-2	(1460)	
2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphinic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaClO4	20°C	0.10M	U			K1=9.75	1985SIa (85781)	2863

C13H15N203P		H2L						CAS 80767-73-3	(1461)	
2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphinic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaClO4	20°C	0.10M	U			K1=10.10	1985SIa (85794)	2864

C13H15N203P		H2L						CAS 80767-74-4	(1462)	
2-Hydroxyphenyl-(N-4-pyridylmethylamino)methylphosphinic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

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-----
Fe+++      gl  NaCl04  20°C 0.10M U      K1=10.23      1985SIa (85807)2865
*****
C13H15N2O4P      H3L      CAS 80767-78-8 (1463)
2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.CH2.C5H4N
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  NaCl04  20°C 0.10M U      K1=16.72      1985SIa (85820)2866
*****
C13H15N2O4P      H3L      CAS 85946-85-6 (1464)
2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.CH2.C5H4N
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  NaCl04  20°C 0.10M U      K1=16.80      1985SIa (85833)2867
*****
C13H15N2O4P      H3L      CAS 85946-86-7 (1465)
2-Hydroxyphenyl-(N-4-pyridylmethylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.CH2.C5H4N
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  NaCl04  20°C 0.10M U      K1=17.80      1985SIa (85846)2868
*****
C13H20N04P      H3L      (1471)
2-Hydroxyphenyl-N-(cyclohexylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.C6H11
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  NaCl04  20°C 0.10M U      K1=14.60      1985SIb (86091)2869
*****
C13H26N2O4      L      CAS 90149-54-5 (5534)
N,N'-Dihydroxy-N,N'-diisopropylheptanediamide;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  KNO3    25°C 0.10M C      K1=22.76      1984BHa (86453)2870
                        B(Fe2L3)=62.4
*****
C14H8N3O8S2F3      HL      (9231)
1-(2-Thenoyl),4-trifluoro,2-[2-hydroxy-2-sulpho-5-nitrophenylazo]butadi-1,3-one;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  KCl     25°C 0.1M U      K1=8.67      B2=15.60      2004ACa (86610)2871
*****

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C14H8O4 H2L Quinizarin CAS 81-64-1 (1060)
1,4-Dihydroxyanthraquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++ sp alc/w 25°C 43% U 1991MJa (86664)2872

$$K(\text{Fe} + \text{H}_2\text{L} = \text{FeHL} + \text{H}) = 1.66$$
$$K(\text{FeHL} + \text{Fe} = \text{Fe}_2\text{L} + \text{H}) = 1.56$$

In 42.8% v/v MeOH/H₂O, 0.50 M NaClO₄

Fe+++ sp alc/w 20°C 50% U 1982KMd (86665)2873

$$K(\text{Fe}+\text{HL})=10.9$$

Medium: 50% v/v EtOH/H₂O

C14H807S H3L (4037)

1,4-Dihydroxyanthraquinone-2-sulfonic acid, quinizarin-2-sulfonic acid;

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

Fe+++ sp NaCl04 25°C 0.50M U 1991MJa (86778)2874

$$K(\text{Fe} + \text{H}_2\text{L} = \text{FeHL} + \text{H}) = 1.29$$
$$K(\text{FeHL} + \text{Fe} = \text{Fe}_2\text{L} + \text{H}) = 0.91$$

Fe+++ sp oth/un 25°C 0.10M U 1971TAa (86779)2875

$$K(\text{Fe} + \text{H}_2\text{L} = \text{FeHL} + \text{H}) = 1.48$$
$$K(4\text{Fe} + 3\text{H}_2\text{L} = \text{Fe}_4\text{L} + 6\text{H}) = 11.14$$

Fe+++ sp NaCl 29°C 0.10M U 1964JJ a (86780)2876

$$K(\text{Fe} + \text{H}_2\text{L} = \text{FeHL} + \text{H}) = 3.73(?)$$

C14H10N02F3 HL CAS 530-28-9 (2574)

N-(3-Trifluoromethylphenyl)-2-aminobenzoic acid; $\text{HOOC}(\text{C}_6\text{H}_4)\text{NH}(\text{C}_6\text{H}_4)\text{CF}_3$

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

Fe+++ gl mixed 22°C 90% U K1=5.17 1982GKb (86897)2877

Medium: 90% DMF/H₂O

C14H11O2NF2S HL CAS 51679-49-3 (2928)

N-((3-Difluoromethylthio)phenyl)anthranilic acid; $\text{HOOC}(\text{C}_6\text{H}_4).\text{NH}.\text{(C}_6\text{H}_4\text{)}. \text{S.CHF}_2$

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

Fe+++ gl mixed 22°C 90% U K1=5.42 1982GKb (87027)2878

Medium: 90% DMF/H₂O

C14H11O2NF2S HL CAS 51679-50-4 (2929)

N-((4-Difluoromethylthio)phenyl)anthranilic acid; $\text{HOOC}(\text{C}_6\text{H}_4).\text{NH}.\text{(C}_6\text{H}_4\text{)}. \text{S}.\text{CHF}_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++ gl mixed 22°C 90% U K1=5.27 1982GKb (87032)2879
Medium: 90% DMF/H2O

C14H12N2 L CAS 3002-81-1 (451)
5,6-Dimethyl-1,10-phenanthroline;

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

Fe+++ sp oth/un 25°C 0.0 U B3=18.55 1968LAa (87161)2880

Medium: acetate and phosphate buffers

C14H12N4O2Br2 HL CAS 72833-87-5 (2533)
2-(2-(3,5-Dibromopyridyl)azo)-5-dimethylaminobenzoic acid;

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

Fe+++ sp diox/w 25°C 40% C K1=7.85 1986KHa (87318)2881

C14H13N L CAS 4217-54-3 (6299)
10-Methyl-9,10-dihydroacridine;

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

Fe+++ sp non-aq 25°C 100% U K(FeP+L)=3.32
K(FePL+L)=2.38 1989FKb (87359)2882

Medium: CH2Cl2. FeP=tetraphenylporphyrinatoiron(III) perchlorate

C14H14N2O3 H2L (7146)
N-Pyridoxyl-2-hydroxyaniline; HO.C6H4.NH.CH2.C7H6NO2

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

Fe+++ sp NaClO4 25°C 0.10M U K1=21.35 B2=45.8 19950Ja (87662)2883

C14H14N4O3 HL CAS 82845-52-1 (6626)
Pyridoxal isonicotinoylhydrazone;

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

Fe+++ sp KNO3 25°C 0.10M U B2=34.0 1990VHa (87700)2884
K(Fe+H2L=FeH2L)=8.93
K(Fe+2H2L=FeH4L2)=15.89
K(Fe+2HL=FeH2L2)=24.80
K(Fe+HL+L=FeHL2)=29.0

Medium: succinic-succinate buffer

C14H15N2O8Cl H4L (1903)

4-Chloro-1,2-diaminobenzene-N,N,N',N'-tetraethanoic acid;

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

Fe+++	gl	KNO3	25°C	0.50M	C	H		K1=20.99 K(Fe+HL)=16.30 B(FeL(OH))=26.69	1997SDa (87748)	2885
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DH(K1)=2.5 kJ mol⁻¹, DS(K1)=408 J K⁻¹ mol⁻¹

C14H16N03P H2L CAS 25881-35-0 (1469)

Phenyl-N-(benzylamino)methylphosphonic acid; C6H5.CH(PO3H2).NH.CH2.C6H5

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

Fe+++	gl	NaClO4	20°C	0.10M	U			K1=11.80	1985SIb (87810)	2886
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C14H16N04P H3L CAS 61146-25-6 (1470)

2-Hydroxyphenyl-N-(benzylamino)methylphosphonic acid; C6H4(OH)CH(PO3H2).NH.CH2.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	NaClO4	20°C	0.10M	U			K1=14.95	1985SIb (87823)	2887
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C14H16N208 H4L CAS 40774-59-2 (1901)

1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KNO3	25°C	0.50M	C	H		K1=21.82	1997SDa (87951)	2888
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K(Fe+HL)=16.45

B(FeL(OH))=26.98

DH(K1)=3.24 kJ mol⁻¹, DS(K1)=420 J K⁻¹ mol⁻¹

C14H17N09 HL CAS 95594-32-4 (7504)

2,4-Dihydroxy-2H-1,4-benzoxazin-3-(4H)-on-glucoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.20M	C			K1=7.41 B2=13.52	1998FKa (88033)	2889
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B(FeH-1L2)=8.80

K(Fe+HL=FeL+H)=0.56

C14H17N204P H3L (1472)

2-Hydroxyphenyl-N-(2-(2'-pyridyl)ethylamino)methylphosphonic acid; C6H4(OH)CH(PO3H2)NHCH2CH2C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	NaClO4	20°C	0.10M	U			K1=16.31	1985SIb (88043)	2890
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C14H18N2O2 HL (7898)

1-(2-Hydroxyphenyl)-2,5-diaza-8-oxonona-1,5-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	alc/w	25°C	0.2M	U			1999MTc (88064)	2891
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K(Fe+L)=8.48

Medium: 0.2 M KCl in 3:7 v/v H2O/EtOH

C14H18O8 L (7000)

1.2-Dihydroxy-3,4,5-triethoxycarbonylcyclopenta-2,5-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	KNO3	20°C	0.10M	U	I	K1=12.43 B2=21.48	1977KKd (88142)	2892
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K3=7.28

K(FeL2+H)=3.42

Data also for 70% w/w MeOH/H2O

C14H20O5 L Benzo15-crown-5 CAS 14098-44-3 (608)

2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	con	mixed	25°C	90%	C		K1=3.15	2003ISa (88268)	2893
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Medium: 90% v/v DMSO/H2O.

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
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Fe+++	sp	NaClO4	25°C	0.10M	U			1998Va (88649)	2894
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K(FeL+H)=1.10

*K(Fe(H2O)L)=-6.9

Fe+++	EMF	KNO3	25°C	0.10M	C		K1=28.70	1997DFa (88650)	2895
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K(FeL+H)=1.91

K[Fe(OH)L+H]=9.51

Fe+++	vlt	oth/un	18°C	0.20M	U	T	K1=29.49	1972B0a (88651)	2896
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K1(28 C)=29.15, K1(35 C)=28.90, K1(40 C)=28.75

Fe+++	EMF	NaClO4	20°C	0.10M	U		K1=28.05	1967BAC (88652)	2897
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K(FeL+OH)=9.70

Fe+++	gl	KCl	25°C	1.0M	U	T	H	1963GMc (88653)	2898
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K(Fe(OH)L+H)=9.32

K(2FeLOH=(FeLOH)2)=1.01

K(FeLOH+H)=9.95(1.0 C), 8.90(42.3 C), DH=-41.8 kJ mol⁻¹(25 C), DS=-114

K(dimer)=1.31(0 C), 0.89(42.3 C). DH=-16, DS=-40

Fe+++ sp oth/un 30°C 1.0M U K1=26.93 1963RSa (88654)2899

Fe+++ dis NaClO4 20°C 0.10M U 1963STc (88655)2900
B(FeL(OH))=36.6

Medium: KClO4

Fe+++ sp oth/un ? ? U 1960BCb (88656)2901
K(FeL+H02)=2.87

Fe+++ sp oth/un 20°C ? U K1=27.48 1960BGa (88657)2902
K(Fe+H2L)=10.95
K(Fe+HL)=17.0

C14H22N4O10 H3L CAS 29725-87-9 (5074)
Ethylenedinitrilo-N,N'-bis(methylenecarbonyliminoethanoic)-N,N'-diethanoic acid;

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

Fe+++ gl KNO3 25°C 0.10M U 1970MMc (88933)2903
K(FeH-1L+H)=2.95
K(FeH-2L+H)=3.57

C14H22N4O10 H4L DGENTA CAS 29725-86-8 (2371)
N,N-Diglycylldiaminoethane-tetraethanoic acid;(-CH2.HNCOCH2N(CH2COOH)2)2

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

Fe+++ gl KNO3 25°C 0.10M U K1=14.0 1970MMc (88950)2904

C14H23N3O10 H5L DTPA CAS 67-43-6 (238)
Diethylenetriamine-pentaethanoic acid; H0OC.CH2.N(CH2.CH2.N(CH2.COOH)2)2

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

Fe+++ gl NaClO4 25°C 0.10M C K1=28.0 2001CCa (89238)2905
K(Fe(OH)L+H)=9.66
K(FeL+H)=3.56

K1 from competition with DTPA using LC-MS.

Fe+++ EMF NaClO4 20°C 1.00M C 2000BMa (89239)2906
K(Fe+CrL)=8.15

Method: Pt/Fe+++ /Fe++ and glass electrodes.

Fe+++ EMF KNO3 25°C 0.10M C K1=27.74 1997DFa (89240)2907
K(FeL+H)=3.37

Fe+++ EMF NaClO4 25°C 1.00M U K1=28.7 1985PLb (89241)2908
K(Fe+HL)=21.4

K(Fe+H2L)=14.3

Fe+++ sp oth/un 25°C 0.10M U 1974MBa (89242)2909
B(FeH4L)=34.27

Fe+++ sp NaCl04 20°C 0.10M U 1973KBc (89243)2910
K(Fe+HL)=19.5

Fe+++ EMF NaCl04 20°C 0.10M U K1=27.3 1967BAc (89244)2911
K(FeL+H)=3.58
K(FeL+OH)=3.9

Fe+++ EMF oth/un 20°C 0.10M U K1=27.50 1959AND (89245)2912
K(Fe+HL)=19.48

Fe+++ gl KNO3 25°C 0.10M U K1=28.6 1959VCa (89246)2913
K(FeL+H)=3.56
K(FeL+OH)=4.12

C14H24N2O7 H3L (3440)
N-(2-Hydroxycyclohexyl)ethylenediamine-N,N',N'-triethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Fe+++ EMF oth/un 25°C 0.10M U K1=21.46 1960SAc (89494)2914
K(FeL(OH)2+H)=8.00

C14H24N2O8 H4L HMDTA CAS 1633-00-7 (920)
1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2.CH2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Fe+++ sp KNO3 20°C 0.10M U K1=16.50 1977KKc (89575)2915
Fe+++ sp oth/un 19°C ? U 1965ZAa (89576)2916
K(Fe+HL)=10.3

C14H24N2O8 H4L EDTP (2936)
Diaminoethane-N,N,N',N'-tetrapropanoic acid; (HOOC.CH2CH2)2N.CH2CH2.N(CH2CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Fe+++ gl KCl 30°C 0.10M U K1=14.4 1953CCb (89682)2917
K(FeL+OH)=9.9
K(FeLOH+OH)=7.1

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

Fe+++ sp oth/un 19°C dil U K1=20.38 1971CAg (89864)2918

Fe+++ sp NaClO4 25°C 0.10M U K1=20.5 1963SCa (89865)2919

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

Fe+++ gl KCl 25°C 0.10M C K1=26.8 1993DSa (90083)2920

K(FeL+H)=2.17

K(Fe(OH)L+H)=7.75

C14H26N4O6 H2L (4690)

Hexanoic acid bis(3-hydroxycarbamoyl-propyl)amide;

HONHCO(CH2)3NHCO(CH2)4CONH(CH2)3COHNOH

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

Fe+++ gl KCl 25°C 0.20M C K1=19.1 1999FEa (90264)2921

B(Fe2L3)=55.6

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

Fe+++ gl R4N.X 25°C 0.05M U K1=17.3 1999BDb (90365)2922

Medium: Et4NC1O4

C14H28N2O4 L CAS 73586-26-2 (5535)

N,N'-Dihydroxy-N,N'-diisopropyloctanediamide;

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

Fe+++ gl KNO3 25°C 0.10M C K1=22.63 1984BHa (90466)2923

B(Fe2L3)=62.3

C14H36N4O12P4 H8L CAS 107446-90-2 (2015)

1,4,7,11-Tetraazacyclotetradecane-N,N',N'',N'''-tetramethylphosphonic acid;

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

Fe+++ nmr none 25°C 0 U K1=33.5 1992MNa (90872)2924

B(FeHL)=42.7

B(FeH2L)=50.7

B(FeH3L)=57.3

B(FeH-1L)=20.7

Calculated from protonation constants reported by S A Pisareva et al.

Fe+++	nmr none	25°C	0 U	K1=30.6	1992MNa (90873)2925
				B(FeHL)=38.7	
				B(FeH2L)=45.2	
				B(FeH3L)=50.5	
				B(FeH-1L)=21.2	

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	20°C	50%	U		K1=14.12	1973MTb (90983)	2926
Medium: 50% MeOH, 0.1 M									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	20°C	50%	U		K1=13.83	1973MTb (90985)	2927
Medium: 50% MeOH, 0.1 M									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100M	C				2001ADb (91022)	2928

Fe+++	gl	NaNO3	20°C	0.10M	C	1991ESa (91023)2929
						K(Fe+20H+L)=44.2
						K(Fe(OH)2L+H)=8.88
						K(Fe(OH)L+H)=6.76
						K(Fe2(OH)2L+H)=5.50

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	oth	alc/w	30°C	80%	U			K(FeOH+L)=11.0	1972SMb	(91068)2930

K(FeOH+2L)=19.50

C15H12NO2Br L (1202)

3-Bromo-benzoylacetanilide; Br.C6H4.CO.CH2.CO.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U			K1=8.44 B2=13.52	1981SNa	(91406)2931
Fe+++	sp	alc/w	25°C	60%	U			K1=8.90 B2=15.07 B3=18.06	1976SEa	(91407)2932

C15H12NO2Br L (1200)

4-Bromo-benzoylacetanilide; Br.C6H4.CO.CH2.CO.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U			K1=9.16 B2=15.54 B3=18.75	1976SEa	(91409)2933

C15H12NO2Cl L (1201)

3-Chloro-benzoylacetanilide; Cl.C6H4.CO.CH2.CO.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U			K1=8.43 B2=13.66	1981SNa	(91413)2934
Fe+++	sp	alc/w	25°C	60%	U			K1=9.07 B2=15.25 B3=18.50	1976SEa	(91414)2935

C15H12NO2Cl L (1199)

4-Chloro-benzoylacetanilide; Cl.C6H4.CO.CH2.CO.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U			K1=8.88 B2=14.65	1981SNa	(91417)2936
Fe+++	sp	alc/w	25°C	60%	U			K1=9.24 B2=15.76 B3=18.82	1976SEa	(91418)2937

C15H12O2 HL Diphenylacac CAS 120-46-7 (362)

1,3-Diphenylpropane-1,3-dione, Dibenzoylmethane; C6H5.CO.CH2.CO.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	dis	NaCl04	25°C	4.0M	C			K1=11.4 B2=20.80 B3=26.7	1985IIa	(91548)2938

Method: extraction into CCl4; analysis by spectrophotometry.

K(Fe+3HL(org)=FeL3(org)+3H)=-2.1. Values for K1, B2, B3 are approximate.

C15H13NO2 HL CAS 959-66-0 (245)
Benzoyl-acetanilide; C6H5.CO.CH2.CO.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U		K1=9.52 B2=16.02	1981SNa (91628)	2939
Fe+++	sp	alc/w	25°C	60%	U		K1=9.52 B2=16.02 B3=19.05	1976SEa (91629)	2940

Fe+++ sp alc/w 35°C 60% U K1=6.92 1971TSg (91630)2941
Medium: 60% EtOH

Fe+++ sp oth/un 35°C 0.10M U T K1=8.61 1971TSg (91631)2942
K1(20 C)=8.70, K1(25 C)=8.67, K1(30 C)=8.64

C15H13N5O2 HL BIAAP CAS 385824-97-5 (8021)
2-(2-Benzimidazolylazo)-4-acetamidophenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	none	25°C	0.0	C		K1=5.35	2001MEa (91678)	2943

C15H14N2O5S HL (9232)
3-(5-Sulphonylnaphthylazo)penta-2,4-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.1M	U	H	K1=7.76	2004ACb (91735)	2944

for 35 C K1=7.55; for 45 C K1=7.33

C15H14N2O6S H2L (6312)
2-Carboxy-2'-hydroxy-3',5'-dimethylazobenzene-4-sulfonic acid;
(CH3)2(OH)C6H2.N:N.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	50%	U	T	K1=14.30 B2=24.75	1976BDb (91741)	2945

At 35 C:K1=14.20, K2=10.30. 45 C:14.05, 10.20. Data also for 3',5'-dichloro-analogue. K1=10.60, K2=8.15 at 25 C

C15H14O3 HL (5102)
2-Hydroxy-4-benzyloxy acetophenone; C6H5.CH2.O.C6H3(OH).CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	diox/w	27°C	75%	U		K1=9.07 B2=15.53	1973KDc (91780)	2946

Medium: 75% dioxan, 0.1 M NaCl04

C15H14O7 H5L CAS 970-73-0 (1796)

Epigallocatechin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	none	20°C		U			1998JSa (91820)	2947
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K1eff=27.4

K(Fe+LH3=FeLH2+H)=4.90

K(FeLH2+LH2=FeLH+LH3)=8.60

K1eff by competition with EDTA at pH 7.

C15H15N02	HL	CAS 61-68-7	(2927)
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N-(2,3-Dimethylphenyl)anthranilic acid; H00C(C6H4).NH.(C6H3)(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	mixed	22°C	90%	U		K1=5.66	1982GKb (91830)	2948
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Medium: 90% DMF/H2O

C15H15N303	H2L	CAS 72343-06-7	(6768)
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Pyridoxal benzoylhydrazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	KNO3	25°C	0.10M	U		B2=48.0	1990VHa (91905)	2949
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K(Fe+HL=FeHL)=27.2

K(Fe+2HL=FeH2L2)=38.5

K(Fe+HL+L=FeHL2)=44.3

Medium: succinic-succinate buffer

C15H16N406	H2L	CAS 97570-39-3	(8600)
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N,N'-1,3-Propanediylbis[1,6-dihydro-1-hydroxy-6-oxo]-2-pyridinecarboxamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	NaCl04	25°C	0.10M	C			1985SWb (91951)	2950
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B(Fe2L3)=52.3

Method: competition with edta.

C15H17N40Br	HL	CAS 14357-53-2	(712)
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2-(5-Bromo-2-pyridylazo)-5-diethylaminophenol; BrC5H3N.N:N.C6H3(OH)N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	KCl	25°C	?	U		B2=10.41	1988WSa (91980)	2951
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C15H18N208	H4L	CAS 101455-18-9	(1902)
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1-Methyl-3,4-diaminobenzene-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++ gl KNO3 25°C 0.50M C H K1=22.05 1997SDa (92083)2952
 K(Fe+HL)=16.57
 B(FeL(OH))=27.16

DH(K1)=-1.7 kJ mol⁻¹, DS(K1)=416 J K⁻¹ mol⁻¹

C15H20N2O7 H4L HBET (6954)
 N-(Hydroxobenzyl)diaminoethane-N,N',N'-triethanoic acid;
 HO.C6H4.CH2.N(CH2COOH)CH2CH2.N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.10M	C		K1=32.02 B(FeHL)=33.59	1995MMa (92167)2953	
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C15H21NO6 H3L Domic acid CAS 14277-97-5 (8625)
 2-Carboxy-4-[5-carboxy-1-methyl-1,3-hexadienyl]-3-pyrrolidinethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	vlt oth/un		25°C	0.70M	C		K1=18.7 K1eff=8.7	2001RBa (92197)2954	
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Method: adsorptive cathodic stripping voltammetry using salicylaldoxime.

Medium: UV seawater, 6.5 mM HEPES, pH 8.0.

C15H27N3O7 H3L (7396)
 4,7,11-Tris(carboxymethyl)-1-oxa-4,7,11-triazacyclotridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	R4N.X	25°C	0.10M	C		K1=21.24 K(FeL+H)=3.02	1997CCa (92479)2955	
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Medium: Me4NNO3

C15H35N5 L CAS 158523-84-3 (7630)
 2R,5S,8R,11S,14S-Pentamethyl-1,4,7,10,13-pentaazacyclopentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	none	25°C	0	U		*K1(FeLC12)=-3.6 *K2=(FeLC12)=-7.4	1998ZBb (92600)2956	
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C16H11NO3 HL HPBI CAS 41836-94-6 (7740)
 3-Phenyl-4-benzoyl-5-isoxazolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	dis	non-aq	30°C	100%	U		Kd=5.57	1999SPa (92685)2957	
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Kd: Fe+3HL(org)=FeL3(org)+3H.

$\left(\frac{1}{\sqrt{\pi}} e^{-x^2} \right), \quad \left(\frac{x}{\sqrt{\pi}} e^{-x^2} \right), \quad \left(-\frac{x^2}{\sqrt{\pi}} e^{-x^2} \right)$

$$f_1 = f_2 = \dots = f_{n-1} = f_n = f = \text{const.} = f_0$$

Method: fluorescence, pH=2.6

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

Medium: 61.1 wt % EtOH/H₂O, T=0.50 M LiCl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	U		K1=3.54	1982MHa (93600)	2964

C16H15NO2		L					CAS 31844-90-3	(1198)	
3-Methylbenzoylacetanilide; CH3.C6H4.CO.CH2.CO.NH.C6H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U		K1=9.80 B2=17.05	1981SNa (93608)	2965
Fe+++	sp	alc/w	25°C	60%	U		K1=9.71 B2=15.91 B3=19.19	1976SEa (93609)	2966

C16H15NO2		L					(1197)		
4-Methylbenzoylacetanilide; CH3.C6H4.CO.CH2.CO.NH.C6H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U		K1=9.91 B2=16.39 B3=19.23	1976SEa (93611)	2967

C16H15NO3		HL					(1196)		
4-Methoxybenzoylacetanilide; CH3O.C6H4.CO.CH2.CO.NH.C6H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	alc/w	25°C	60%	U		K1=10.25 B2=18.03	1981SNa (93614)	2968
Fe+++	sp	alc/w	25°C	60%	U		K1=10.10 B2=16.88 B3=19.41	1976SEa (93615)	2969

C16H15NO7		H4L					(4082)		
N-(3-Carboxy-2-hydroxynaphthyl-1-ylmethyl)iminodiethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	U		K1=20.6	1975TRb (93631)	2970

C16H16N2O2		H2L					CAS 94-93-9	(2101)	
N,N'-Bis(salicylidene)ethylenediamine; (HO(C6H4)CH:NCH2-)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	0.2M	U		K(Fe+HL)=5.53	1999MTc (93679)	2971
Medium: 0.2 M KCl in 3:7 v/v H2O/EtOH									
Fe+++	gl	mixed	25°C	80%	C		K1=22.85	1991LMa (93680)	2972
Medium: 80% w/w DMSO/H2O, 0.1 M KClO4									

 Fe+++ gl mixed 25°C 80% C K1=25.85 1983LMa (93681)2973
 In 80% w/w DMSO-H2O; 0.10 M KClO4.

Fe+++ gl mixed 25°C 80% C 1983LMb (93682)2974
 K(FeL+A)=14.68
 K(2FeL+H2O=(FeL)2O+2H)=-12.30
 In 80% w/w DMSO-H2O; 0.10 M KClO4. H2A=catechol.

C16H16N2O4 H2L CAS 6345-72-8 (6729)
 N,N'-Ethylenebis(salicylamide), N,N'-1,2-Ethanediylbis(2-hydroxybenzamide);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++ sp alc/w 25°C 61% C K1=20.80 1995SDa (93703)2975
 Medium: 61.1 wt % EtOH/H2O, I=0.50 M LiCl.
 Data for the N,N'-propyl- (K1=20.77) and N,N'-butyl- (K1=21.19) compounds

C16H17NO3 H2L N-Salicyl-Phe CAS 23847-75-8 (6938)
 2-(N-(2-Hydroxybenzyl))amino-3-phenylpropanoic acid;
 HO.C6H4.CH2.NH.CH(CH2.C6H5)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++ sp NaClO4 25°C 0.10M U K1=17.71 19940Ja (93728)2976

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++ gl diox/w 25°C 75% U K1=13.07 B2=24.77 1990ASb (93777)2977

C16H18N2O5 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
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Fe+++ gl KNO3 25°C 0.10M M T H K1=7.10 B2=10.60 1983SBc (93817)2978
 Also data for 35 C. DH(B2)=2.85 kJ mol⁻¹, DS(B2)=303 J K⁻¹ mol⁻¹.

C16H18O9 HL Chlorogenic acid 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
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Fe+++ gl KNO3 20°C 1M U K1=17.64 1996AAa (93899)2979
 B(FeHL)=22.20

C16H20N2O10 H6L (704)
1,2-Dihydroxy-3,6-di-(methyleneiminodiethanoic acid)-benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		K1=22.0 K(Fe+H2L)=12.84 K(Fe+HL)=19.02 K(FeHL+H)=4.95 K(FeL+H)=8.87	1988ZHa (94065)	2980

C16H22N2O6P2 H4L CAS 85425-45-2 (5193)
2,2'-(Ethylenedi-imino)bis(2-hydroxybenzylphosphinic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	KCl	?	0.10M	U		K1=31.0	1968MRc (94141)	2981

C16H22N2O6P2 H4L CAS 86857-07-0 (5192)
2,2'-(Ethylenedi-imino)bis(benzylphosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	KCl	?	0.10M	U		K1=15.90 K(Fe+H2L)=8.43	1968MRc (94151)	2982

C16H22N4O L (3471)
2-(N-(2-Dimethylaminoethyl)-N-(4-methoxybenzyl)amino)pyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.06M	U T		K1=3.14 B2=6.19 K1=3.17(0 C), 3.10(45 C)	1961SMa (94198)	2983

C16H24N2O4 H2L (5873)
2,3-Dihydroxy-N,N'-diethylterephthalamide; C6H2(OH)2(CO.NEt2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	C		K1=16.3 B2=30.70 K3=11.5	1989GMb (94307)	2984

Data for propyl (K1=16.0, K2=15.2, K3=11.9) and butyl (K1=11.0) analogues

C16H24N2O12 H4L (7217)
Rhizoferrin; (CH2CH2NHCOCH2C(OH)(COOH)CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	2.00M	C		K1=25.3 B(FeHL)=30.8	1996CDc (94323)	2985

B(FeH2L)=35.1

B(FeH3L)=36.9

C16H24O6 L Benzo18-crown-6 CAS 14098-24-9 (513)

2,3-Benzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2-ene;

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

Fe+++ dis non-aq 25°C 100% U 1998BJa (94399)2986

Keff(FeA(ClO4)+L)=3.17

Medium: Chloroform, 0.1 m Mg(ClO4)2, pH=8.1. A: desferrioxamine B.

C16H25N04 L (7444)

1-Aza-4,7,10,13-tetraoxa-1-phenyl-cyclopentadecane;

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

Fe+++ con mixed 25°C 80% C IH 1999MFa (94516)2987

K(Fe(NO3)3+L)=2.22

K(Fe(ClO4)3+L)=2.33

Medium: 80% acetonitrile/H2O. Data for 70-95% acetonitrile/H2O, and for 20-35 C. DH(K)=24.84 kJ mol⁻¹, DS(K)=512.2 J K⁻¹ mol⁻¹.

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

Fe+++ EMF KCl 25°C 0.10M C K1=29.4 1991CMb (94894)2988

K(FeL+H)=3.23

K1 by competitive reaction with EDTA

C16H28N4O8 H2L Alcaligin CAS 117959-43-0 (7649)

1,8,11,18-Tetrahydroxy-1,6,11,16-tetraazacycloeicosane-2,5,12,25-tetrone;

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

Fe+++ gl KCl 25°C 0.10M C K1=23.5 1998HRa (94942)2989

B(Fe2L3)=64.7

B(FeH-1L)=17.2

B(Fe2H-4L2)=16.7

C16H29N3O7 H3L (7395)

4,8,12-Tris(carboxymethyl)-1-oxa-4,8,12-triazacyclotetradecane;

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

Fe+++ gl R4N.X 25°C 0.10M C K1=21.93 1997CCa (94951)2990

K(FeL+H)=2.63

K(Fe(OH)L+H)=3.8

Medium: Me4NN03

C16H29N3O8 H3L (6699)
1,7-Dioxa-4,10,13-triazacyclopentadecane-N,N',N"-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	C			K1=19.82 K(FeL+H)=2.65 K(Fe(OH)L+H)=6.15	1993DSa (94972)	2991

C16H30N4O8 H4L CAS 111557-57-4 (5834)
Diaminoethane-N,N'-diethanoic-N,N'-di(N-2-propyl-acetohydroxamic)acid;(CH2N(CH2COOH)
)CH2CON(OH)Pr

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaCl	25°C	0.10M	U			K1=30.2 B(FeH2L)=39.1 K(FeL=FeLOH+H)=-10.27 K(FeL+H)=4.26 K(FeHL+H)=4.71	1988TRa (95077)	2992

C16H30N6O6 H2L DOCYDMAHA CAS 221003-26-5 (7588)
1,4,8,11-Tetraazacyclotetradecane-12,14-dioxo-4,8-bis(N-methylacetohydroxamic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C			K1=21.33 B(FeHL)=24.50 B(FeH2L)=27.94 B(FeH-2L)=5.07 B(Fe2L3)=60.50	1998SGa (95095)	2993

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
Fe+++	gl	R4N.X	25°C	0.05M	U			K1=16.2	1999BDb (95206)	2994

Medium: Et4NCl04

C17H12N2O3 H2L (2040)
1-(2-Carboxyphenylazo)-2-hydroxynaphthalene; HOOC.C6H4.N:N.C10H6.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.01M	U			K1=8.57	1981GMe (95703)	2995

C17H14N2O2 L CAS 4551-69-3 (698)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	dis	NaClO4	?	0.10M	U		K1=3.60 B2=6.60	1972NIa	(95881)2996

In 0.1 H2SO4, K1=2.90

C17H14O3 H2L CAS 1467-40-9 (795)
1,5-Diphenylpentane-1,3,5-trione; C6H5.CO.CH2.CO.CH2.CO.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	alc/w	25°C	70%	C		B(FeHL)=11.84	1991HKd	(95977)2997
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Medium: 70% v/v MeOH/H2O, 0.5 M NaClO4

C17H16N2O2 HL CAS 65840-98-4 (8454)
3-(2-Hydroxy-5-methoxyphenyl)-5-(4-methoxyphenyl)pyrazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	diox/w	27°C	70%	C		K1=11.50 B2=22.40 K3=7.25	1994SNa	(96029)2998
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Medium: 70% v/v dioxane/H2O, 0.10 M NaClO4.

C17H17N3O HL (5218)
alpha-Cyano-4-hydroxyphenacylidene-4-dimethylaminoaniline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	alc/w	30°C	100%	U		K(Fe+2HL)=6.95	1970GSe	(96195)2999
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Medium: MeOH

C17H18N2O4 H3L (5874)
N-(2-(Salicylideneamino)ethyl)-(2-hydroxyphenyl)glycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	KN03	25°C	0.10M	U	M	K1=33.3 K(FeL=FeLOH+H)=-6.7 K(FeL+A)=10.6	1989SCb	(96209)3000
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H2A=catechol. Constants determined by competition with EDTA

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
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Fe+++ gl KNO3 20°C 0.1M C I K1=15.91 B2=26.55 2000DSa (96224)3001
B(FeH-1L)=11.76

In 0.05 M KNO3: K1=15.20, B2=26.45, B(FeH-1L)=10.25

C17H19N3 L Antazoline CAS 91-75-8 (3486)

2-(N-(Benzyl)-N-phenylaminomethyl)-1,4,5H-1,3-diazole, antistine;

C3H5N2.CH2.N(C6H5)CH2.C6H5

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

Fe+++ gl KCl 25°C 0.06M U T K1=3.80 B2=7.15 1961SMa (96265)3002

K1=4.09(0 C), 3.63(45 C); K2=3.36(0 C), 3.31(45 C)

C17H21NO L Benadryl CAS 58-73-1 (3492)

N,N-Dimethyl-2-(diphenylmethoxy)ethylamine;

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

Fe+++ gl KCl 25°C 0.06M U T K1=4.05 B2=7.40 1961SMa (96372)3003

At 0 C: K1=4.22, K2=3.42; 45 C: K1=3.82, K2=3.31(45C)

C17H24N4O6 H3L (7349)

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

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

Fe+++ gl R4N.X 25°C 0.10M C K1=21.77 1997DQa (96454)3004

K(FeL+H)=1.74

K(Fe2(OH)L2+H=2FeL)=1.8

Medium: Me4NNO3

C17H26N4O4 H2L CAS 205595-08-0 (8972)

3,11-Bis(carboxymethyl)-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;

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

Fe+++ gl R4N.X 25°C 0.10M C K1=20.49 1998CDa (96503)3005

*K(FeL)=-5.03

Medium: 0.10 M Me4NNO3.

C17H30N4O8 H4L TRITA CAS 60239-20-5 (1018)

1,4,7,10-Tetraazacyclotridecane-1,4,7,10-tetraethanoic acid;

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

Fe+++ gl KCl 25°C 0.10M C K1=27.46 1991CMb (96648)3006

K(FeL+H)=2.64

K1 by competitive reaction with NTA

C17H33N3O9 L CAS 132259-53-1 (6558)
1,1,1-Tris((2-((N-methylhydroxyamino)carbonyl)ethoxy)methyl)ethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.10M	C			K1=28.11 K(FeL+H)=3.72	1991MSa (96736)	3007
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C18H16N2O3 HL (5560)
2-(2-Acetylphenylhydrazono)-1-phenyl-but-1,3-dione;
C6H5.CO.C(CO.CH3):N.NH.C6H4.COCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	diox/w	25°C	75%	U			K1=14.00 B2=26.70	1990ASb (97170)	3008
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C18H19NO5 H3L (6939)
2-N-Carboxymethyl-N-2-hydroxybenzylamino-3-phenylpropanoic acid;
HOC6H4CH2N(CH2COOH)CH(CH2Ph)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaClO4	25°C	0.10M	U			K1=21.61	19940Ja (97307)	3009
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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
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Fe+++	gl	KCl	25°C	0.10M	C			K1=31.8 K(FeL+H)=1.0	1993MMa (97395)	3010
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Fe+++	sp	KNO3	25°C	0.10M	C			K1=40.1	1992GVa (97396)	3011
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Fe+++	EMF	oth/un	?	?	U			K1=20.0	1968TRc (97397)	3012
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By polarography: K1=20.2

Fe+++	sp	KNO3	20°C	0.10M	U			K1=33.91	1964ALa (97398)	3013
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Fe+++	gl	KNO3	25°C	0.10M	U			K1=33	1964PCa (97399)	3014
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Fe+++	sp	NaClO4	25°C	0.10M	U			K1=33.9	1964SCc (97400)	3015
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C18H20N2O6 H4L EHPG CAS 10328-28-6 (429)
N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (HOOCC(C6H4OH)NHCH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	NaCl	25°C	1.0M	U			K1=39.3 K(Fe(OH)L+H)=12.67	1990ADb (97425)	3016
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Fe+++      gl  KCl      25°C 0.10M C      K1=35.54      1989Bmd (97426)3017
                                     K(FeLOH+H)=11.78
                                     K1=33.28 (meso ligand)
                                     K(FeLOH+H)=10.45 (meso ligand)
                                     K(FeL+H)=2.72 (meso ligand)

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*****
C18H20N2O12S2      H6L      (5478)
1,6-Bis(2,3-dihydroxy-5-sulfbenzoyl)-1,6-diazahehexane;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe+++      gl  KNO3     25°C 0.10M C      K1=27.4      1982KRb (97450)3018
                                     B(FeHL2)=51.1
                                     B(FeH2L2)=58.3
                                     B(Fe2L3)=76

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*****
C18H21NO2      HL      (683)
trans-5-(3-Methylbutyl)-2-hydroxy-diphenylketoxime;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe+++      gl  KNO3     35°C 0.10M C      K1=14.52 B2=28.01 1978JIa (97489)3019

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*****
C18H21N3O4      H2L      CAS 76218-93-4 (9124)
1,5-Bis-(2-hydroxybenzamido)-3-azapentane;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe+++      sp  alc/w     25°C 2.5% C      K1=23.3      2004DRa (97494)3020
                                     *K(FeL(H2O))=-5.2
                                     *K(FeH-1L(H2O))=-7.0
                                     *K(FeH-1L(OH))=-9.2
                                     K(FeL+H)=2.2

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Medium: 2.5% v/v MeOH/H2O, 0.5 M NaClO4. K(Fe+H3L=FeH2L+H)=0.55.

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

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe+++      gl  oth/un    25°C 0.10M U      K1=28.8      1965LCa (97541)3021

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

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Fe+++      EMF oth/un    ?      ? U      K1=31.25      1970DMc (97674)3022

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C18H28N4O4 H2L (7378)
 7-Methyl-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene-3,11-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	R4N.X	25°C	0.10M	C		K1=20.64 K(FeL)=2.84 K(Fe(OH)L+H)=ca 5.9	1997CDb (97784)	3023

Medium: NMe4NO3

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)
 Triethylenetetraaminehexaethanoic acid;((HOOCH2)2N)2CH2CH2N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	EMF	KNO3	25°C	0.10M	C		K1=27.66 K(FeL+H)=7.49 K(FeL+Fe)=12.13 K(FeHL+H)=2.05 K[Fe2(OH)L+H]=2.11	1997DFa (98030)	3024

K[Fe2(OH)2L+2H]=5.91

Fe+++	EMF	KNO3	25°C	0.10M	U		K1=26.8 B(Fe2L)=40.5	1970HAa (98031)	3025
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By glass electrode, K(FeL+H)=7.60, K(FeHL+H)=2.75, K(Fe2L+2OH)=21.0

Fe+++	gl	KNO3	25°C	0.10M	U	M	K(Fe2(OH)2L+2H)=6.6 K(Fe2(OH)2L+2HA)=5.05 K(Fe2L+2A)=23.5 K(Fe2L+2B)=18.10	1967BMe (98032)	3026
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H4A=1,2-dihydroxybenzene-3,5-disulfonic acid, H2B=oxine-5-sulfonic acid

Fe+++	EMF	NaClO4	25°C	0.10M	U		K1=29.4 K(FeL+H)=7.51 K(FeHL+H)=2.60 K(FeL+OH)=4.20 K(FeLOH+OH)=3.50	1965SCb (98033)	3027
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K(Fe2LOH+OH)=2.9

C18H32N4O6 H2L Bisucaberin CAS 112972-60-8 (7650)
 6,17-Dihydroxy-1,6,12,17-tetraazacyclododecasane-2,5,13,16-tetrone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	C		K1=23.5 B(Fe2L3)=64.3	1998HRa (98138)	3028

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
Fe+++	gl	KCl	25°C	0.10M	C		K1=26.53 K(FeL+H)=3.53	1991CMb (98202)	3029

K1 by competitive reaction with NTA

C18H32N4O9	H4L	CAS 189282-31-3	(8974)
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4,7,10,13-Tetrakis-(carboxymethyl)-1-oxa-4,7,10,13-tetraazacyclopentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	R4N.X	25°C	0.10M	C		K1=23.82 K(FeL+H)=3.03 K(FeL+Fe)=6.87	1999CDb (98256)	3030

Medium: 0.10 M NMe4NO3.

C18H32N6O8	H2L	CAS 204185-67-1	(7978)
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1,1-Bis(10-hydroxy-2,5,10-triaza-1,6,9-trioxoundecanyl)ethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	C		K1=20.03 K(2FeL(H2O)2+L=Fe2L3)=19.52 K(2Fe+3L)=59.45	2001NGa (98263)	3031

K(2Fe+3L) from EDTA competition experiment.

C18H32N6O8	H2L	CAS 380230-89-7	(7977)
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1,1-Bis(9-hydroxy-2,5,9-triaza-1,6,10-trioxoundecanyl)ethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	C		K1=19.85 K(2FeL(H2O)2+L=Fe2L3)=19.39 K(2Fe+3L)=59.22	2001NGa (98265)	3032

K(2Fe+3L) from EDTA competition experiment.

C18H33N3O9	H3L	(6700)
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1,7,13-Trioxa-4,10,16-triazacyclooctadecane-N,N',N''-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	C		K1=22.5 K(FeL+H)=3.65	1993DSa (98296)	3033

C18H34N4O9	H3L	D03A-B	(7301)
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10-[2,3-Dihydroxy-(1-hydroxymethyl)-propyl]-1,4,7,10-tetraazacyclododecane-1,4,7-triethanoic ac.;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	C			K1=25.7 K(Fe+HL)=2.7	1996TKa (98378)	3034

C18H34N6O8		H4L						CAS 253273-56-2 (5455)		
2,2',2'',2'''-(1,2-Cyclohexanediyldinitrilo)tetrakis[N-hydroxy-N-methyl] acetamide;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	KNO3	25°C	0.10M	C			B(FeH3L)=46.39 B(FeH4L)=48.2 B(Fe2H3L2)=78.4	2000ARa (98388)	3035

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
Fe+++	gl	R4N.X	25°C	0.05M	U			K1=13.3	1999BDb (98574)	3036
Medium: Et4NClO4										

C18H37N5		L						CAS 160964-42-1 (7629)		
2R,3R,8S,9S-Dicyclohexano-1,4,7,10,13-pentaazacyclopentadecane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	none	25°C	0	U			*K1(FeLC12)=-3.7 *K2(FeLC12)=-7.50	1998ZBb (98813)	3037

Fe+++	gl	none	25°C	0	U			*K1(FeLC12)=-4.1 *K2(FeLC12)=-7.73	1998ZBb (98814)	3038

C18H38N4O8		H2L						CAS 98902-93-3 (5580)		
7,24-Dihydroxy-1,4,14,17-tetraoxa-7,11,20,24-tetraazahexacosane-8,23-dione;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C			K(FeL+H)=15.78 K(FeHL+H)=10.58	1985SMb (98863)	3039

C19H14O7S		H4L						Pyrocatechol Vi CAS 369596-29-2 (709)		
Pyrocatechol Violet, 3-[3,4-Dihydroxyphenyl-3-hydroxy-4-oxo-2,5-cyclohexadien-1-ylidenemethyl]-b.;										

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

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-----
Fe+++      sp  KCl      25°C 0.50M U                      1974CMc (99105)3040
                                     K(Fe+H3L=FeH2L+H)=0.25
                                     K(FeH2L+H3L=FeH3L2+2H)=-5.82
                                     K(FeH3L2+H2L=FeH4L3+H)=-1.91
                                     K(2Fe+H3L=Fe2HL+2H)=4.65
K(Fe+H2L)=7.5, K(Fe+H2L+HL)=19.3, K(Fe+H2L+2HL)=27.2, K(Fe2+HL)=22.2
K(Fe+H2L+2HL=Fe(H4L3))=27.2, K(2Fe+HL=Fe2HL)=22.2. Ligand: Pyrocatechol sulf.
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Fe+++      sp  KNO3      ?  0.50M U                      1972YVa (99106)3041
                                     K(FeOH+2H2L)=13.80
*****
C19H15N08      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
Fe+++	sp	diox/w		20%	U			K(Fe+HL)=19.6	1973INa (99132)	3042

Medium: 20% dioxan, 0.1 M

```

*****
C19H19N3O4      H2L      CAS 75281-26-4 (1604)
N-Pyridoxylidene-L-tryptophan;
-----

```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaCl	25°C	0.50M	C			K(Fe+HL)=9.65 K(Fe+2HL)=18.38	1989KOb (99267)	3043

```

*****
C19H22N2O6      H4L      CAS 102165-09-3 (9199)
Propylenediamine-N,N'-bis(2-hydroxyphenylethanoic acid);
-----

```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	NaCl	25°C	0.10M	C			K1=33.54 B(FeHL)=35.84 B(FeH-1L)=21.74	2004SGb (99327)	3044

Additional method: UV-visible spectrometry

```

*****
C19H24N2O2      L      (1564)
1,5-Diaza-7,8:13,14-dibenzo-9,12-dioxacyclopentadecan-7,13-diene;
-----

```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	con	non-aq	25°C	100%	C T H			K1=4.93	2000MTc (99362)	3045

Medium: acetonitrile. Data for 20-35 C. DH(K1)=-4.50 kJ mol⁻¹, DS(K1)=79.2 J K⁻¹ mol⁻¹.

```

*****
C19H28N4O6      H3L      CAS 106967-44-6 (8973)
-----

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3,7,11-Tris(carboxymethyl)-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	R4N.X	25°C	0.10M	C		K1=19.21 *K(FeL)=-5.46	1998CDa	(99407)3046

Medium: 0.10 M Me4NNO3.

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
Fe+++	gl	KNO3	25°C	0.10M	C		K1=25.5 B(FeHL)=37.8 B(FeH2L)=41.6	1999GGa	(99502)3047

C20H14N4 L CAS 63283-05-6 (4146)
2,2':6',2'':6'',2'''-Quaterpyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KNO3	25°C	0.02M	U	H	K1=11.40	1964B0a	(99741)3048

Medium: HNO3. DH(K1)=-38 kJ mol⁻¹, DS=92 J K⁻¹ mol⁻¹

C20H16N2O2 H2L CAS 3946-91-6 (2733)
N,N'-Bis(2'-hydroxybenzylidene)-1,2-diaminobenzene; (HOC6H4CH:N)2.C6H4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	mixed	25°C	80%	C		K1=17.80 B(FeHL)=21.52 B(FeH-1L)=12.99	1997HMc	(99773)3049

Medium: 80% w/w DMSO/H2O, 0.5 M NaClO4.

C20H18NO6Cl H2L Phe-OTA CAS 303-47-9 (7614)
Ochratoxin A;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.10M	C		K1eff=3.34	1998AGa	(99822)3050

Method: fluorescence. pH=2.6. For Ochratoxin B, K1eff=3.49.

C20H18N4O2 HL (5917)
Pyruvic monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

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

N,N'-1,2-Ethanediylobis[N-(phenylmethyl)]glycine;

Fe+++ g1 NaCl04 25°C 0.10M U K1=15.20 2001SGc (99947)3052

$$*K(\text{Fe}(\text{OH})\text{L}) = -7.27$$

N-[2-[(Carboxymethyl)[(2-hydroxyphenyl)methyl]amino]ethyl]-N-(phenylmethyl)glycine;

Fe+++ sp NaCl04 25°C 0.10M C K1=27.00 2001SGc (99955)3053

Butylenediamine-N,N'-bis(2-hydroxyphenylethanoic acid);

Fe+++ g1 NaCl 25°C 0.10M C K1=29.69 2004SGb (99960)3054

$$B(\text{FeH-1L})=18.75$$

Diaminoethanebis(2-hydroxy-4-methyl-phenyl)ethanoic acid;

Fe+++ sp NaCl 25°C 1.0M U K1=39.0 1990ADB (99962)3055

$$K(\text{FeL}+\text{H})=1.9$$

For racemic form: $K_1=37.9$; $K(\text{Fe}(\text{OH})\text{L}+\text{H})=11.86$; $K(\text{FeL}+\text{H})=2.5$

N,N'-Di-(2-hydroxybenzyl)-diaminoethane-N,N'-diethanoic acid;

Fe+++ g1 KCl 25°C 0.10M U K1=39.01 1994MMe (99993)3056

$$K(\text{FeL}+\text{H})=1.51$$

Fe+++	sp	KCl	25°C	0.10M	M		K1=39.68	1990MMa (99994)3057	

Fe+++	gl	KNO3	25°C	0.10M	U		K1=39.68	1967LMd (99995)3058	

C20H24N2O12S2		H6L				CAS 3625-85-3		(5755)	
N,N'-Bis(2-hydroxy-5-sulfobenzyl)-diaminoethane-N,N'-diethanoic acid;									

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

Fe+++	sp	KCl	25°C	0.10M	M		K1=36.87	1990MMa (100027)3059	
							K(Fe(OH)L+H=FeL+H2O)=10.57		

Fe+++	gl	KCl	25°C	0.10M	C		K1=36.87	1989MSc (100028)3060	
							K(FeH-1L+H)=10.56		

Fe+++	gl	KCl	25°C	0.10M	C		K1=38.30	1984TMb (100029)3061	

C20H24O6		L		DiBz-18-Crown-6		CAS 14187-32-7		(604)	
2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene									

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

Fe+++	con	mixed	25°C	90%	C		K1=2.76	2003ISa (100120)3062	
Medium: 90% v/v DMSO/H2O.									

C20H26N4O6		H4L		ENDA-HP		(6746)			
N,N'-Bis(3-hydroxy-6-methyl-2-pyridylmethyl)diaminoethane-N,N'-diethanoic acid;									

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

Fe+++	sp	KCl	25°C	0.10M	C		K1=35.08	1992MSa (100329)3063	
							K(FeL+H)=5.86		
							K(FeHL+H)=4.84		
Additional method: Pt/Fe(III),Fe(II) electrode									

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

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

Fe+++	gl	KCl	25°C	0.10M	C		K1=28.21	1984TMd (100413)3064	
							K(FeOHL+H)=6.72		

C20H34N4Fe		L				(7287)			
1,1-Bis(5-methyl-2,5-diazaheptyl)ferrocene;									

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

Fe+++ gl KNO3 25°C 0.10M C 1996TBb (100510)3065

K(FeL+H)=9.5
K(FeHL+H)=7.7
K(FeH2L+H)=4.2
K(FeH3L+H)=3.8

C20H36N6O8 H2L CAS 204185-70-6 (7979)
1,1-Bis(11-hydroxy-2,5,11-triaza-1,6,10-trioxododecanyl)ethane;

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

Fe+++ sp NaCl04 25°C 0.10M C K1=19.69 2001NGa (100589)3066
K(2FeL(H2O)2+L=Fe2L3)=19.53
K(2Fe+3L)=58.91

K(2Fe+3L) from EDTA competition experiment.

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

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

Fe+++ con mixed 25°C 90% C K1=2.96 2003ISa (100646)3067
Medium: 90% v/v DMSO/H2O.

Fe+++ dis non-aq 25°C 100% U 1995BSa (100647)3068

K(Fe(HA)X+L=Fe(HA),L,X)=4.25
K(Fe(HA)Y+L=Fe(HA),L,Y)=2.21

Medium:CHCl3. Data for host-guest associations. H3A: desferrioxamine. X=Cl04
Y=NO3. L: cis-syn-cis and cis-anti-cis mixture. Also data for syn-L, anti-L

C20H37N5O10 H5L CAS 111557-58-5 (5835)
Diethylenetriamine-N,N',N"-triethanoic-N,N"-di(N-2-propyl-acetohydroxamic) acid;

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

Fe+++ sp NaCl 25°C 0.10M U K1=29.7 1988TRa (100731)3069
B(FeH2L)=4
K(FeL=FeLOH+H)=-9.93
K(FeL+H)=8.10
K(FeHL+H)=6.15

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

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

Fe+++ gl KCl 25°C 0.10M C K1=26.42 1991MSa (100761)3070
K(FeL+H)=3.74

C20H39N5O2 HL CAS 333309-52-7 (8662)

16-Aminodocosahydro-16-methyl-dibenzo[b,i][1,4,8,11]tetraazacyclotetradecine-7-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.50M	M		K1=25.3 K(Fe+L+OH)=7.1 B(FeHL)=4.8	2001BYb (100768)	3071

C21H18O5S H3L o-Cresol red CAS 1733-12-6 (1634)
2-Cresolsulfonephthalein;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	kin	NaClO4	25°C	0.10M	C		K(Fe(OH)HL+H)=2.25 K(Fe+HL)=1.47	1975NFb (101131)	3072

Medium: 0.10 M NaClO4/HClO4.

C21H20O6 H3L Curcumin CAS 458-37-7 (8774)
1,7-Bis(4-hydroxy-3-methoxyphenyl)-1,6-heptadiene-3,5-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	50%	C		K1=22.06 B(FeH2L)=29.13 K(Fe+H2L)=9.14 K(Fe+H2L=FeL+2H)=2.07 K(Fe+H2L+2OH=FeH2L(OH)2)=29.1	2002BFb (101156)	3073

Medium: 50% v/v MeOH/H2O, 0.10 M NaNO3. B(FeH-1L)=12.51

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	70%	C		K1=37.0 K(FeL+H)=7.40	1998MMa (101159)	3074

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

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
Fe+++	sp	NaClO4	25°C	1.00M	C		B(Fe2L2)=29.38	1995PDa (101214)	3075

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

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  KCl      25°C 0.10M C      K1=31.01      1991MSb (101272)3076
                        K(FeL+H)=6.86
                        K(FeHL+H)=3.38
*****
C21H26N2O6      H4L      BHTDA      CAS I4 (6592)
N,N'-Bis(2-hydroxybenzyl-trimethylenedinitrilo-N,N'-diethanoic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  NaCl      25°C 1.0M U      K1=37.8      1990ADb (101276)3077
                        K(FeL+H)=3.7
K(Fe(OH)L+H) is about 12.75 as far as L decomposes at pH>12.75
*****
C21H27N3O6      H4L      CAS 54135-84-1 (8822)
1,10-Bis(2,3-Dihydroxybenzoyl)-1,5,10-triazadecane;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  KCl      25°C 0.20M C      K1=31      2001CBc (101289)3078
                        K(FeL+H)=5.15
                        K(FeHL+H)=3.65
                        K(FeH2L+H)=1.50
*****
C21H27N3O6      H4L      Pistallarin      CAS 89647-69-8 (8821)
1,10-Bis(3,4-Dihydroxybenzoyl)-1,5,10-triazadecane;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  KCl      25°C 0.20M C      K1=29      2001CBc (101291)3079
                        K(FeL+H)=6.05
                        K(FeHL+H)=4.25
                        K(FeH2L+H)=1.80
*****
C21H29N7O14P2      H2L      alpha-NAD      CAS 7298-93-3 (2775)
Nicotinamide adenine dinucleotide, Diphosphopyridine nucleotide;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  oth/un 25°C 0.10M U      K1eff=3.86      1973GEa (101362)3080
                        K2eff=4.60
Medium: glycine buffer. pH=2.0
*****
C21H38N6O8      H2L      CAS 204185-69-3 (7980)
1,1-Bis(10-hydroxy-2,5,10-triaza-1,6,9-trioxoundecanyl)pentane;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	oth/un	20°C	0.01M	U		K1=9.4 K3=5.6	B2=16.60 1956ARd (101760)	3087

C22H24N2O8 H2L Tetracycline CAS 60-54-8 (2201)
Tetracycline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaN03	25°C	0.10M	C		K1=13.4	1992GAa (101815)	3088
Fe+++	gl	oth/un	20°C	0.01M	U		K1=9.9 K3=6.8	B2=18.50 1956ARd (101816)	3089

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	oth/un	20°C	0.01M	U		K1=9.6 K3=5.7	B2=16.80 1956ARd (101883)	3090

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	M		K1=30.78 K(FeL+H)=6.93 K(FeHL+H)=6.02	1990MMA (101950)	3091
Fe+++	gl	KCl	25°C	0.10M	C		K1=30.78 K(FeL+H)=6.93 K(FeHL+H)=6.02	1989MSc (101951)	3092
Fe+++	nmr	none	15°C	0.0	U		K1=36.88 K(FeL+H)=7.49 K(FeHL+H)=6.59	1985TMA (101952)	3093
Fe+++	gl	KCl	25°C	0.10M	C		K1=36.91 K(FeL+H)=7.49 K(FeHL+H)=6.59	1984TMb (101953)	3094
Fe+++	gl	KCl	25°C	0.10M	C		K1=36.91 K(FeL+H)=7.49 K(FeHL+H)=6.59	1984TMc (101954)	3095

C22H28N2O6 H4L (8056)
N,N'-Bis(2-hydroxybenzyl)ethylenediamine-,N,N'-dipropanoic acid;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  KNO3   25°C 0.10M U          K1=31.16        1992GKa (102014)3096
*****
C22H31N5O6          H2L                      CAS 813432-03-0 (9200)
Imino-bis(acetyl(1-(3'-aminopropyl)-3-hydroxy-2-methyl-4-pyridinone);
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  KNO3   25°C 0.10M C          K1=26.16        2004SGc (102191)3097
                        B(FeHL)=31.16
                        B(FeH3L)=33.59
                        B(Fe2L3)=74.26
                        B(Fe2HL3)=79.90
B(Fe2H2L3)=85.54, B(Fe2H3L3)=89.53, B(Fe2H-2L2)=44.00
*****
C22H32N4O14P2      H6L    DPDP          CAS 118248-91-2 (5896)
N,N'-Dipyridoxyldiaminoethane-N,N'-diethanoic acid 5,5'-diphosphoric acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  NaCl   25°C 0.10M C          K1=33.52        1989RCa (102203)3098
                        K(FeL+H)=7.88
                        K(FeHL+H)=6.85
                        K(FeH2L+H)=6.08
                        K(FeH3L+H)=5.31
*****
C22H34N2O8P2      H4L                      CAS 92278-41-6 (8106)
N,N'-Bis(2-hydroxybenzyl)diaminoethane-N,N'-bis(methylenephosphonic acid monoethyl
ester);
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  KCl    25°C 0.10M C          K1=28.19        1984TMd (102216)3099
                        K(FeOHL+H)=6.70
*****
C22H34O9          HL                      CAS 205057-99-4 (7637)
5-[11'-(Oxymethyl)-2',3'-benzo-18-crown-6]pentanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      dis non-aq 25°C 100% U          1998BJa (102245)3100
                        K(FeA(ClO4)+HL)=3.38, pH=3.2
                        Keff(FeA(ClO4)+L)=4.29, pH=9.3
Medium: Chloroform, 0.1 m Mg(ClO4)2. A: desferrioxamine B.
*****
C22H35N5O7          H2L                      CAS 132149-21-4 (7606)
N,N'-Bis(3-(acetylhydroxamino)propyl)-4-pentyloxy-2,6-pyridinedicarboxamide;
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaNO3	25°C	0.10M	C		K1=21.3	1994CDc (102259)	3101

At pH 1.0, K1eff=2.32.

C22H36N4O13 H5L Aerobactin CAS 26198-65-2 (2258)
 Aerobactin; ((CH3.CO.NOH.(CH2)4)(CO2H)CH.NH.CO.CH2)2.C(CO2H)(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		K1=23.06 B(FeH3L)=31.74 B(FeH2L)=29.70 B(FeHL)=26.68 B(FeH-1L)=18.48	1979HCa (102288)	3102

C22H40N4O12 H4L CAS 98902-95-5 (5581)
 7,24-Dihydroxy-1,4,14,17-tetraoxa-7,11,20,24-tetraazahexacosa-8,23-dione-7,24-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		K1=24.45 K(FeL+H)=4.73 K(FeHL+H)=3.67 K(FeH2L+H)=2.70	1985SMb (102368)	3103

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaNO3	20°C	0.10M	C		K1=16.85 B(Fe2L)=22.61	1996ZLa (102550)	3104

Fe+++	sp	KCl	25°C	0.10M	U		B(Fe2L2)=16.63	1987WZa (102551)	3105
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Fe+++	sp	NaCl	25°C	0.10M	U	M		1971NIc (102552)	3106
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Medium: 0.1(Na,NH4),(Cl,OH). K(Fe+2H2LA2=Fe(HLA)2+2H+2A)=-2.05
 A=zephiramine.

Fe+++	sp	KCl	25°C	0.10M	U		B(Fe2L2)=37.6	1969KLb (102553)	3107
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Fe+++	sp	oth/un	?	?	U		K(Fe+2HL)=6.40	1968ATa (102554)	3108
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Fe+++	sp	KCl	20°C	0.10M	U		K1=15.6 B(Fe2L2)=36.2	1963LKa (102555)	3109
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$$B(Fe2L)=20.2$$

Fe+++ sp oth/un 25°C 0.10M U 1962SDb (102556)3110

$$K(?)=4.8$$

C23H18N2O3 HL (5561)
2-(2-Acetylphenylhydrazone)-1,3-diphenyl-prop-1,3-dione;
C6H5.CO.C(CO.C6H5):N.NH.C6H4.COCH3

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

Fe+++ gl diox/w 25°C 75% U K1=12.42 B2=23.96 1990ASb (102593)3111

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

Fe+++ sp KNO3 20°C 0.10M U K1=5.07 1993ZZa (102628)3112
B(Fe2L)=10.07

Fe+++ sp KCl 20°C 0.10M U K1=17.9 1965LSa (102629)3113
B(Fe2L)=22.5
B(Fe2L2)=37.9

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

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

Fe+++ sp KCl 25°C 0.10M C K1=34.22 1991BMa (102755)3114
K(FeL+H)=2.71
K(FeOHL+H)=11.31

For racemic ligand. For meso form: K1=34.83, K(FeL+H)=2.98, K(FeOHL+H)=12.03

C23H33N3O2 L OenN(CH3)ditnH4 CAS 85735-82-6 (5583)
1,12,16-Triaza-3,4:9,10-dibenzo-12-methyl-5,8-dioxacyclononadeca-3,9-diene;

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

Fe+++ sp NaNO3 25°C 0.10M M 1988Mwa (102807)3115
*K(FeL(H2O)2)=-5.79
*K(FeLH2O(OH))=-11.71

C24H24N2O6 H4L CAS 385439-50-9 (9197)
p-Xylylenediamine-N,N'-bis(o-hydroxyphenyl)ethanoic acid;

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

Fe+++ gl NaCl 25°C 0.10M C K1=30.13 2004SGb (102945)3116

B(FeHL)=34.12

Additional method: UV-visible spectrometry

C24H31N3O8 H3L CAS 35369-55-2 (6972)

N,N''-Bis(2-hydroxybenzyl)-2,5,8-triazanonane-N,N',N''-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	C			K1=30.44 K(FeL+H)=8.81 K(FeHL+H)=4.89 K(FeH2L+H)=1.20	1994MMf (103056)	3117

C24H32N2O6 H3L Me4-HBED (6507)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	M			K1=37.41	1990MMa (103061)	3118

C24H32O8 L DiBz-24-Crown-8 CAS 14174-09-5 (580)

2,3:14,15-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracos-2,14-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	con	mixed	25°C	90%	C			K1=3.45	2003ISa (103128)	3119

Medium: 90% v/v DMSO/H2O.

C24H33N5O8 H5L (6747)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	C			K1=32.7 K(FeL+H)=7.8 K(FeHL+H)=5.6 K(FeH2L+H)=4.3 K(FeH3L+H)=3.0	1992MSa (103202)	3120

Additional method: Pt/Fe(III),Fe(II) electrode

C24H34N2O5 H3L (6509)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	M			K1=31.21 K(FeL+H)=3.43	1990MMa (103213)	3121

C24H34N3O6 H3L CAS 134627-54-6 (6564)
 N-(2-Hydroxy-3,5-dimethylbenzyl)-N'-((3-hydroxy-1,2,5-trimethyl-4-pyridinyl)methyl)
 EDDA;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  KCl      25°C 0.10M C          K1=32.97      1991MSb (103217)3122
*****
```

C24H34N4O12 H6L (5480)
 1,4-Bis(2,5,5-tris(carboxymethyl)-2,5-diazapentyl)benzene;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  KNO3     25°C 0.10M C          B(FeHL)=31.53
                                     K(FeHL+H)=4.91
                                     K(FeH2L+H)=2.34
                                     K(FeH3L+H)=1.5
*****
```

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

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  KCl      25°C 0.10M C          K1=27.2      1991MSb (103269)3124
*****
```

C24H44O8 L Dicy-24-crown-8 CAS 17455-23-1 (2401)
 2,3,14,15-Dicyclohexyl-1,4,7,10,13,16,19,22-octaoxacyclotetracosane;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      con mixed 25°C 90% C          K1=3.63      2003ISa (103429)3125
Medium: 90% v/v DMSO/H2O.
*****
```

C25H20O9 H5L CAS 2947-64-0 (4166)
 4',3''-Dihydroxy-3,3',4''-trimethylfuchsone-5,5',5''-tricarboxylic acid, Chromoxane
 violet R

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      sp  oth/un   ?  0.10M U          K1=12.53      1967LMF (103604)3126
*****
```

C25H22O10 H3L Silybin CAS 22888-70-6 (8699)
 3,5,7-Trihydroxy-2-[3-(4-hydroxy-3-methoxyphenyl)-2-hydroxymethyl-1,4-benzodioxan-6-
 -yl]-4chroman;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Fe+++      gl  alc/w    25°C 100% C      M          2001BGa (103643)3127
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B(FeH3L)=37.03
B(FeH3LA)=41.53
B(FeH3LA2)=46.91

Medium: MeOH, 0.10 M NaNO3. A is methoxide ion.

C25H24O8 HL CAS 19697-86-0 (8775)
1,7-Bis[4-(acetyloxy)-3-methoxyphenyl]-1,6-heptadiene-3,5-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	50%	C			K1=11.44 B(FeH-2L)=3.06 K(Fe+2OH+L=Fe(OH)2L)=30.1 B(FeH-3L)=-5.00	2002BFb (103650)	3128

Medium: 50% v/v MeOH/H2O, 0.10 M NaNO3.

C25H32N6 L CAS 132177-84-5 (536)
3,11-Bis(2-pyridylmethyl)-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C			K1=15.87 K(FeL+H)=3.31	1999CDa (103744)	3129

C25H40O9 HL CAS 205058-00-0 (7638)
8-[11'-Oxymethyl)-2',3'-benzo-18-crown-6]octanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	dis	non-aq	25°C	100%	U			K(FeA(ClO4)+HL)=3.18, pH=3.2 Keff(FeA(ClO4)+L)=4.55, pH=9.3	1998BJa (103773)	3130

Medium: Chloroform, 0.1 m Mg(ClO4)2. A: desferrioxamine B.

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
Fe+++	sp	KNO3	25°C	0.10M	C	I M		K(FeL+H+phen)=6.96	20010Ha (103804)	3131

In 0.10 M KNO3/0.16 M sodium dodecyl sulfate, K=8.64.

Fe+++	vlt	oth/un	25°C	0.7M	C			K1eff=21.6	2000WHa (103805)	3132
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Competitive ligand (1-nitroso-2-naphthol) cathodic stripping voltammetry.

Medium: photo-oxidised seawater, pH 6.9. At pH 8 (kinetic): K1eff=22.1

Fe+++	gl	KCl	25°C	0.20M	C			K1=30.4	1999FEa (103806)	3133
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B(FeHL)=41.01									
Fe+++	sp	NaCl04	25°C	0.10M	C			1994BSb (103807)	3134
							K(Fe+HL)=28.30		
							K(Fe+H+HL)=30.60		
In 0.04 M sodium dodecyl sulfate.									
Fe+++	gl	KCl	25°C	0.10M	C		K1=30.99	1989EHa (103808)	3135
							K(FeL+H)=10.40		
Fe+++	sp	NaCl04	25°C	2.00M	U			1987BBb (103809)	3136
							K(FeHL+H)=0.57		
							K(Fe+H4L=FeH3L+H)=4.10		
							K(FeH2L+Fe=Fe2HL+H)=2.72		
Fe+++	kin	NaCl	25°C	1.00M	U			1984BBc (103810)	3137
							K(FeH2L+Fe=Fe2HL+H)=1.76		
Fe+++	sp	NaCl	25°C	1.00M	U			1983BBd (103811)	3138
							K(Fe+H4L=FeH3L+H)=2.64		
							K(Fe+H4L=FeH2L+2H)=3.40		
							K(Fe+H4L=FeHL+3H)=2.28		
							K(2Fe+H4L=Fe2HL+3H)=5.43		
Fe+++	cal	NaCl	25°C	0.10M	C	H		1982GLb (103812)	3139
DH(Fe+HL)=-84 kJ mol-1, DS(Fe+HL)=303 J K-1 mol-1; DH(Fe+H2L)=-43.1, DS(Fe+H2L)=274.									
Fe+++	kin	NaCl	25°C	1.0M	U			1981BBf (103813)	3140
							K(FeL+Fe)=2.72		
Fe+++	EMF	NaCl04	20°C	0.1M	U			1963AEa (103814)	3141
							K(Fe+HL)=30.60		
							K(Fe+H2L)=21.84		
							K(FeL+H) > 10		

C26H36N2O10		H2L		CAS 158069-81-9		(8592)			
N,N'-1,2-Ethanediyibis[N-[(3,4,5-trimethoxyphenyl)methyl]glycine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaCl04	25°C	0.10M	U		K1=13.95	2001SGc (104160)	3142
							*K(FeL)=-3.34		
							*K(Fe(OH)L)=-7.34		

C26H38N2O4		L		CAS 80757-23-9		(2450)			
N,N'-Bis(benzyl)-1,10-diaza-4,7,13,16-tetraoxacyclooctadecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

Fe+++ con non-aq 25°C 100% C T H K1=4.28 2000MTc (104184)3143
 Medium: acetonitrile. Data for 20-35 C. DH(K1)=0.0 kJ mol⁻¹, DS(K1)=
 80.4 J K⁻¹ mol⁻¹.

C26H42N6O2 H2L BDBPH CAS 226714-05-2 (7225)
 13,27-Dimethyl-3,6,9,17,20,23-hexaazatricyclo[23.3.1]triacontahexaene-29,30-diol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	gl	NaCl	25°C	0.10M	C		K1=33.85 K(FeL+H)=9.75 K(FeHL+H)=6.50 *K(FeL)=-15.19 K(FeL+Fe)=15.03	2000SMi (104261)	3144
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*K(Fe2L)=-3.03, *K(Fe2H-1L)=-6.70, *K(Fe2H-2L)=-9.36, *K(Fe2H-3L)=-10.50,
 *K(Fe2H-4L)=-11.06.

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
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Fe+++	gl	R4N.X	25°C	0.10M	C		K1=23.92 K(FeL+H)=4.97 K(FeHL+H)=1.86 K(FeL+Fe)=7.02 K(Fe2L(OH)+H)=2.16	1998ACc (104305)	3145
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Medium: N(CH3)4NO3. K(Fe2L(OH)2+2H)=4.38.

C27H29NO10 H2L Daunorubicine CAS 23541-50-6 (5660)
 Daunomycin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++	sp	NaCl04	25°C	0.50M	U		K(Fe+H2L=FeHL+H)=1.36 K(FeHL+Fe=Fe2L+H)=0.30	1991MJa (104439)	3146
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Full name is 10-[(3-Amino-2,3,6-trideoxy-alfa-L-lyxo-hexopyranosyl)oxyl]-7,8,
 ,9,10-tetrahydro-6,8,11-trihydroxy-8-acetyl-1-methoxy-5,12-naphthacenedione

Fe+++	gl	KCl	25°C	0.05M	U		K(Fe+3HL)=28.40	1985BGB (104440)	3147
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Fe+++	sp	oth/un	20°C	0.15M	U		K(Fe+HL)=11.0	1982KMD (104441)	3148
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C27H29NO11 L Adriamycin CAS 25316-40-9 (2407)
 Doxorubicin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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K(Fe2(OH)2L+H)=5.50
K(FeHL+H)=3.84, K(Fe(OH)2L+Fe=Fe2(OH)6L+4H)=-17.08, K(Fe2(OH)6L+H)=10.63
K(Fe2(OH)5L+H)=9.02, K(Fe2(OH)4L+H)=7.32, K(Fe2(OH)3L+H)=6.35, K(FeL+H)=6.20

C27H36N6O3 H3L TACN-HP (6748)
N,N',N''-Tris(3-hydroxy-6-methyl-2-pyridylmethyl)-1,4,7-triazacyclononane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	C		K1=49.98 K(FeL+H)=6.14 K(FeHL+H)=5.09 K(FeH2L+H)=4.51 K(Fe+H3L)=33.04	1992MSa (104571)	3156

*K(FeL)=-10.45. Additional method: Pt/Fe(III),Fe(II) electrode

Fe+++	gl	KCl	25°C	0.10M	U		K1=49.98 K(FeL+H)=6.14 K(FeHL+H)=5.09 K(FeH2L+H)=4.51 K(Fe+H3L)=33.04	1990MMg (104572)	3157
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*K(FeL)=-10.45.

C27H45N9O12 H3L CAS 34787-28-5 (3518)
Desferri-ferrichrome;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	KNO3	25°C	0.01M	C		K1=28.3 K(FeL+H)=4.62	1996HAa (104619)	3158
Fe+++	gl	NaNO3	20°C	0.1M	U		K1=29.07 K(Fe+HL)=20.7	1963AEa (104620)	3159

C27H48N6O10 H3L Nocardamin (3519)
Desferri-ferrioxamin E;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		K1=32.21	1992KJb (104636)	3160

Ligand:1,12,23-Trihydroxy-1,6,12,17,23,28-hexaazacyclotritriaconta-2,5,13,16,24,27-hexa-one. Data also for other desferrioximes

Fe+++	gl	NaNO3	20°C	0.1M	U		K1=32.49	1963AEa (104637)	3161
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C27H50N6O9 H3L CAS 5722-48-5 (3520)
N-Acetyl-desferrioxamin B;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Fe+++ gl NaNO3 20°C 0.1M U K1=30.76 1963AEa (104641)3162
K(Fe+HL)=21.6

C28H31N3O18S3 H9L 3,4-LICAMS CAS 71659-79-5 (5469)

N,N',N''-Tris(2,3-dihydroxy-5-sulfonatobenzoyl)-1,5,10-triazadecane;

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

Fe+++ gl KNO3 25°C 0.10M C K1=ca.41 1981HRa (104743)3163

K(Fe+H3L=FeL+3H)=6.40

K(FeL+H)=6.16

K(FeHL+H)=5.3

K(FeH2L+H)=3.10

By spectrophotometry: K(FeL+H)=5.85, K(FeHL+H)=5.32, K(FeH2L+H)=3.05

C28H34N6O12 H6L DA-BDHT(26)N6 CAS 105103-80-8 (5712)

4,7-Bis(carboxymethyl)-10,11,23,24-tetrahydroxy-9,10:22,35-dibenzo-hexaazacyclotricotatetraone;

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

Fe+++ gl KNO3 25°C 0.10M C K1=37.6 1986SMa (104757)3164

K(FeL+H)=10.20

K(FeHL+H)=7.54

K(FeH2L+H)=4.86

C28H46O9 HL (7639)

11-[11'-(Oxymethyl)-2',3'-benzo-18-crown-6]-undecanoic acid;

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

Fe+++ dis non-aq 25°C 100% U 1998BJa (104966)3165

K(FeA(ClO4)+HL)=3.26, pH=3.2

Keff(FeA(ClO4)+L)=4.85, pH=9.3

Medium: Chloroform, 0.1 m Mg(ClO4)2. A: desferrioxamine B.

C28H47N9O13 H3L CAS 37279-99-5 (8259)

Deferricrocin;

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

Fe+++ gl KNO3 25°C 0.10M U K1=30.4 1983WKb (104970)3166

K(FeL+H)=0.53

K(Fe+H3L=FeL+3H)=3.3

C28H51N3O12 L CAS 123074-29-3 (6560)

7,19,30-Trihydroxy-1,13-dimethyl-3,11,15,23,26,34-hexaoxa-7,19,30-triazabicyclopentatricontatrien

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

K(FeL+H)=4.95
K(FeHL+H)=3.52
K(FeH2L+H)=2.5

Fe+++ cal KNO3 25°C 0.10M C H 1991SEa (105192)3175
DH(Fe+H3L=FeL+3H)=-27.2 kJ mol⁻¹. DS(Fe+H3L=FeL+3H)=146.4 J K⁻¹ mol⁻¹

Fe+++ sp KNO3 25°C 0.10M U K1=52 1979HCb (105193)3176
K(Fe+H6L=FeL+6H)=-9.7
K(FeL+H)=4.80
K(FeHL+H)=3.15

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

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

Fe+++ gl KNO3 25°C 0.10M C K1=ca.41 1981HRa (105204)3177
K(Fe+H3L=FeL+3H)=4.43
K(FeL+2H)=13.1

C30H27N3O18S3 H9L MECAMS CAS 71353-06-5 (8172)
1,3,5-Tris[((2,3-dihydroxy-5-sulfobenzoyl)amino)methyl]benzene;

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

Fe+++ gl KNO3 25°C 0.10M C K1=ca.41 1981HRa (105209)3178
K(Fe+H3L=FeL+3H)=6.57
K(FeL+H)=5.74
K(FeHL+H)=4.10
K(FeH2L+H)=3.46

By spectrophotometry: K(FeL+H)=5.19

C30H29N3O16 H6L (6549)
N-(2,3-Dihydroxybenzoyl)serine linear trimer; H-(N(COC6H3(OH)2)).CH(CH2OH).CO)3-OH

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

Fe+++ sp KNO3 25°C 0.10M C H 1991SEa (105211)3179
K(FeL+H)=5.81
K(FeHL+H)=4.82
K(FeH2L+H)=4.32
K(FeH3L+H)=2.38

K(Fe+H6L=FeL+6H)=-15.6. K(Fe+H3L=FeL+3H)=6.5. DH(Fe+H3L)=-14.2 kJ mol⁻¹
DS(Fe+H3L)=75.3 J K⁻¹ mol⁻¹

C30H30N4O4 H4L Deuteroporphrin CAS 68929-05-5 (6220)
Deuteroporphyrin IX, Dihydrogen-2,7,12,17-tetramethyl-3,18-porphinedipropionic
acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo		
Fe+++	sp	NaCl	25°C	0.10M	U			1974JPb (105212)	3180		
							K(2FeL=Fe2H-1L2+H)=-1.47				

C30H44N2O6			H3L				(6508)				
N,N'-Bis(2-hydroxy-3-methyl-5-tert-butylbenzyl)diaminoethane-N,N'-diethanoic acid;											

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo		
Fe+++	sp	KCl	25°C	0.10M	M		K1=38.52	1990MMa (105314)	3181		

C30H50N6O2			L				CAS 380446-61-7 (8002)				
3,7,11,19,23,27-Hexaaza-33,34-dihydroxy-15,31-dimethyltricyclotetratrisaconta-1,13,15,17,29,30-hex											

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo		
Fe+++	gl	KCl	25°C	0.10M	U		K1=30.61	2001WMa (105370)	3182		
							K(FeL+H)=8.02				
							K(FeHL+H)=5.19				
							K(FeL+Fe)=14.06				
							K(Fe2L+H)=11.51				
*K(FeL)=-10.42, *K(Fe(OH)L)=-11.71, *K(Fe2L)=-2.89, *K(Fe2(OH)L)=-6.17,											
*K(Fe2(OH)2L)=-8.78, *K(Fe2(OH)3L)=-10.71, *K(Fe2(OH)4L)=-11.67.											

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		
Fe+++	sp	NaClO4	25°C	0.10M	U			1979YMa (105462)	3183		
							K(Fe+HL)=18.8				
							B(2Fe+L)=31.3				
							K(Fe(OH)HL+H)=6.3				
							K(Fe(OH)L+H)=8.7				
K((FeOH)2L+2H)=11.6. Potentiometry also used											

Fe+++	sp	oth/un	?	0.50M	U			1971KNc (105463)	3184		
							K(Fe+H3L)=8.85				
							K(Fe+H2L)=14.16				
							K(Fe+H4L+H3L)=13.87				
							K(Fe+2H3L)=15.55				

Fe+++	sp	NaNO3	20?°C	0.20M	U			1962BUa (105464)	3185		
							B(Fe2L)=39.80				

Fe+++	sp	NaClO4	?	0.05M	U			1960CHa (105465)	3186		
							K(?)=5.7				

C31H35N3O18S3 H9L 3,3,4-CYCAMS CAS 77069-62-6 (8173)
1,5,9-Tris(2,3-dihydroxy-5-sulfo benzoyl)-1,5,9-triazacyclotridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		K1=ca.38 K(Fe+H3L=FeL+3H)=3.44 K(FeL+H)=6.92 K(FeHL+H)=5.82 K(FeH2L+H)=5.46	1981HRa (105530)	3187

K(FeH3L+H)=2.4. By spectrophotometry: K(FeL+H)=6.78, K(FeHL+H)=5.74,
K(FeH2L+H)=5.54, FeH3L+H)=2.3

C31H37N7 L CAS 259259-40-0 (537)
3,7,11-Tris(2-pyridylmethyl)-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C		K1=15.70 K(FeL+H)=2.75 K(Fe(OH)L+H)=4.11	1999CDa (105537)	3188

C32H37N3O11 H7L CAS 252906-99-3 (8802)
5-[(2,3-Dihydroxybenzoyl)amino]-2,2-bis[3-[(2,3-dihydroxybenzoyl)amino]propyl]penta noic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	alc/w	25°C	2%	U		K1=42.5 K(FeHL+H)=5.15 K(FeL+H)=6.59	2000ITa (105667)	3189

Medium: 2% MeOH/H2O, 0.10 M NaClO4.

K1 determined spectrophotometrically by competition with edta.

C32H38N6O2 H2L CAS 185675-92-7 (7485)
15,31-Dimethyl-3,11,19,27,33,35-hexaazapentacyclohexatriacontadodeca-34,36-diol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	C	M	K1=33.04 B(FeH2L)=48.91 B(FeHL)=41.91 B(FeH-1L)=22.53 B(FeCuL)=45.92	2000HMa (105695)	3190

B(FeCuH-1L)=39.12, B(FeCuH-2L)=29.24, B(FeCdH-1L)=32.85, B(FeCdH-2L)=23.01
B(FeZnH-1L)=32.46, B(FeZnH-2L)=24.57, B(FeMnH-1L)=29.50, B(FeMnH-2L)=20.41

Fe+++	gl	KCl	25°C	0.10M	C		K1=32.02	1999WMa (105696)	3191
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B(FeHL)=41.08
B(FeH2L)=47.99
B(FeH-1L)=22.06
B(Fe2L)=44.9

B(Fe2H-1L)=41.99; B(Fe2H-2L)=34.65; B(Fe2H-3L)=25.64
B(Fe2H-4L)=15.37. Also data for mixed Fe(II)-Fe(III)-L systems.

C32H42N6O12 H6L DA-BDHT(30)N6 CAS 105103-79-5 (5713)
5,20-Bis(carboxymethyl)-12,13,27,28-tetrahydroxydibenzahexaazacyclotriconta-10,15,2
5,30-tetraone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C			K1=36.0 K(FeL+H)=9.69 K(FeHL+H)=6.76 K(FeH2L+H)=3.32	1986SMa (105750)	3192

C32H48N12O12 H2L CAS 219992-86-6 (7437)
Tris(2[2(1-hydroxy-2-oxo-1,2-dihydropyrimidinylamino)ethylaminocarbonyl]ethoxymethyl)
ethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	none	RT	0	U			K1=25.1	1998KHa (105806)	3193

By competition with EDTA. Data for Fe+++ complexes of similar ligands also

C32H52N6O11 H6L CAS 84010-59-3 (7188)
N-(2,3-Dihydroxybenzoyl)desferrioxamine B;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KCl	25°C	0.10M	C			K1=35.4 K(FeL+H)=9.47 K(FeHL+H)=5.56	1994HWb (105821)	3194

K1 by spectrophotometry. Data also for other desferrioxamines

C33H33N3O9 H6L MECAM-Me CAS 79087-35-7 (6163)
1,3,5-Tris(((4-methyl-2,3-dihydroxybenzoyl)amino)methyl)benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	KCl	25°C	0.10M	C			K(FeL+H)=7.98	1989CGc (105872)	3195

C33H33N3O9 H6L EMECAM (7326)
1,3,5-Tris(2,3-dihydroxybenzamidomethyl)-2,4,6-trimethylbenzene;
Me3C6(CH2NHCO(C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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C34H34N4O4 H4L Protoporphyrin9 CAS 553-12-8 (1242)
 3,18-Divinyl-2,7,12,17-tetramethylporphine-2,18-dipropionic acid, Protoporphyrin IX

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	vlt	oth/un	25°C	0.7M	C				2000WHa (106005)	3202
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K_{leff}=22.4

Competitive ligand (1-nitroso-2-naphthol) cathodic stripping voltammetry.

Medium: photo-oxidised seawater, pH 6.9. At pH 8 (kinetic): K_{leff}=21.9.

Fe+++	sp	mixed	25°C	0.0	U	M			1978HKb (106006)	3203
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K(FeLCl+2A)=8.55

K(FeLCl+2B)=8.77

K(FeLCl+2C)=6.27

K(FeLCl+2D)=5.65

A=poly(N-vinylimidazole); B=poly(4(5)-vinylimidazole (9:1 MeOH/DMF).

C=imidazole; D=N-ethylimidazole (DMF).

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KNO3	25°C	0.10M	C				1985KPb (106064)	3204
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K₁=40

K(Fe+H3L=FeL+3H)=5.36

C34H54O8 H2L Lasalocid CAS 25999-20-6 (2335)

Lasalocid acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	dis	non-aq	25°C	100%	C				1998CCe (106134)	3205
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K(FeA+HL=FeAL+H)=-3.8

Medium: CHCl3/H2O (pH=9, 0.1 M Mg(ClO4)2). A: desferrioxamine B.

K: FeA(aq)+HL(org) = FeA(org)+H(aq).

C34H55N7O12 H5L CAS 153502-63-7 (7187)

N-(2,3-Dihydroxy-4-(methyramido)benzoyl)desferrioxamine B;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KCl	25°C	0.10M	C				1994HWb (106164)	3206
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K₁=34.8

K(FeL+H)=9.21

K(FeHL+H)=4.0

K₁ by spectrophotometry. Data also for other desferrioxamines

C35H56N6O13 H3L CAS 30315-65-2 (8261)

Deferriocoprogen;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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B(FeH2L)=57.12

C36H39N3O18S3 H9L CAS 79087-39-1 (2946)

1,3,5-Tris(N-acetyl-N-(2,3-dihydroxysulfobenzyl)aminomethyl)benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KNO3	25°C	0.10M	C			K1=40.3 K(Fe+H3L=FeL+3H)=4.0	1981PWb (106292)	3213

C36H46N4 H2L Octaethylporph. CAS 2683-82-1 (1794)

2,3,7,8,12,13,17,18-Octaethyl-21H,23H-porphine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	U	M		K(FeLA+H)=15.5 K(FeLA+4methyl-ph)=3.49 K(FeLA+ph)=3.50 K(FeLA+4-chloro-ph)=4.35	1990UHa (106368)	3214

Medium: methylene chloride. A=OCH3, ph=phenol. K(FeLA+4-cyano-ph)=4.98, K(FeLA+4-nitro-ph)=5.15, and other subst.phenols and acetic acids.

Fe+++	vlt	R4N.X	23°C	0.10M	U			K1=7.0 B2=12.5	1982BKb (106369)	3215
Fe+++	nmr	non-aq	25°C	100%	U	M		K(FeLCl+2A)=2.82	1976SMa (106370)	3216

Medium: CDCl3. A=1-Methylbenzimidazole

C36H53N11O18 H4L Alterobactin A CAS 153888-52-9 (8504)

Alterobactin A;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	vlt	oth/un	25°C	0.7M	C			K1eff=23.9	2000WHa (106401)	3217

Competitive ligand (1-nitroso-2-naphthol) cathodic stripping voltammetry.

Medium: photo-oxidised seawater, pH 6.9. At pH 8 (kinetic): K1eff=22.3

C36H55N11O19 H5L Alterobactin B CAS 153888-53-0 (8038)

Alterobactin B;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	vlt	oth/un	25°C	0.7M	C			K1eff>24.0	2000WHa (106429)	3218

Competitive ligand (1-nitroso-2-naphthol) cathodic stripping voltammetry.

Medium: photo-oxidised seawater, pH 6.9. At pH 8 (kinetic): K1eff=22.5

Fe+++	vlt	NaCl	25°C	0.10M	C				1995LHb (106430)	3219
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K1eff=43.6 (pH 8.2)

K1eff=37.6 (pH 6.0)

Method: square wave voltammetry. Medium: 0.1 M NaCl, 5 mm BISTRIS.

C36H60N8O8 L CAS 121925-84-6 (7152)

Cyclo(Gly-eLL-Gly)2 (eLL=N,N'-ethylene-bridged (S)-leucyl-(S)-leucine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	U			K1=5.76 K(ML+M)=4.50	1994MKa (106454)	3220

Medium: MeCN

C36H66N6O24 L a-Cyclodextrin CAS 207395-12-8 (7800)

Hexakis(2-amino)-alpha-cyclodextrin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	vlt	oth/un	25°C	0.10M	C			K(Fe(CN)6+L)=3.30	1996GLa (106544)	3221

Medium: 0.1 M aminoacetonitrile buffer, pH 5.3. Method: cyclic voltammetry

Also data for the heptamer and octamer aminocyclodextrin.

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
Fe+++	sp	oth/un	25°C	0.10M	C			K1eff=7.48 K2eff=5.12	1997ASa (106595)	3222

Medium: 0.10 M acetate buffer, pH 5.0.

Fe+++	gl	NaCl04	25°C	0.10M	U			K1=17.7 B(2Fe+L)=29.8 K(Fe(OH)HL+H)=6.5 K(Fe(OH)L+H)=9.3 K((FeOH)2L+2H)=12.4	1979YMa (106596)	3223
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Spectrophotometry also used

Fe+++	sp	NaCl04	?	0.10M	U			K(Fe+H2L)=20.56 B(FeH2L)=43.29 K(FeH2L+H4L)=6.66	1968KKe (106597)	3224
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C37H47N3O15 H6L (7966)

Methyl-2,3,4-tris-O-{N-[2,3-di(hydroxy)benzoyl]-aminopropyl}-1-D-glucopyranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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K(FeH4L+H)=5.25. K1 by spectrophotometry.

C39H42N6O9 L (5718)
1,3,5-Tri(2,6-diaza-6-hydroxy-7-phenylheptane-3,7-dione)benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Fe+++ sp mixed 25°C ? U K1=28 1987Mwa (106712)3226
Medium: DMF/H2O 3:1

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Fe+++ g1 KNO3 25°C 0.10M C K1=40 1985KPb (106714)3227
K(Fe+H3L=FeL+3H)=4.15

C39H51N7O9 H3L TRENDROX CAS 120385-15-1 (5887)
N,N',N''-(Nitrilotris-2,1-ethenyl)tris(N-hydroxy-N-(4-methylphenyl)butanediamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Fe+++	g1	KN03	25°C	0.10M	C	K1=32.9	1989NRa (106725)3228
						K(FeL+H)=2.38	

$$K(\text{FeOH}^+ + \text{H}) = 0.7$$

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
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Fe+++ g1 oth/un 25°C 0.10M U K1=25.00 1983YMa (106786)3229
K(FeH-1L+H)=4.54

$$K(\text{FeH}-2\text{L}+\text{H})=7.54$$
 $K(\text{FeL}_{1/2}\text{H})=1.70$

C40H49N7O11 H5L CAS 128393-06-6 (7655)
Amonabactin T 789;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Fe+++ sp KCl 25°C 0.10M C K1=34.5 1998TRa (106800)3230

B(Fe2L3)=86.4
K(Fe2L3+2H)=18.9
B(Fe2H2L3)=105.3

EDTA used as a competitive ligand. Also data for amonabactin T 732,
amonabactin P 750 and amonabactin P 693.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	KN03	25°C	0.10M	C			K1=40 K(Fe+H3L=FeL+3H)=4.85	1985KPb (106818)	3231

C42H39N7O15S3 H2L CAS 252906-94-8 (7766)
3,3',3''-[Nitrilotris(2,1-ethanediyiminocarbonyl)]tris[4-hydroxy-5-(2-pyridinyl)benzeneHSO3];

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaCl04	25°C	0.10M	C			K1=30.1 K(Fe+H7L=FeH5L+2H)=1.79	2000BBE (106909)	3232

Method: UV/vis spectrophotometry.

C42H50N6O12 H9L (7434)
1,4,10,13-Tetrakis(2,3-dihydroxybenzoyl)-7,16-dimethyl-1,4,7,10,13,16-hexaazacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	gl	mixed	25°C	50%	C			K(H2L+2H)=26.35 K(H2L+3H)=37.24 K(H2L+4H)=47.71 K(H2L+5H)=57.14	1998BBa (106945)	3233

Medium: 50% v/v DMSO/H2O, 0.1 M NMe4Cl. K(H2L+6H)=65.92
K(H2L+7H)=70.78, K(H2L+8H)=75.37.

Fe+++	gl	mixed	25°C	50%	C			K(Fe+H2L+3H)=63.26 K(FeH5L+H)=4.48 K(FeH6L+H)=3.57 K(Fe+H5L)=26.02	1998BBa (106946)	3234
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Medium: 50% v/v DMSO/H2O, 0.1 M NMe4Cl. K(Fe+H6L)=20.03, K(Fe+H7L)=14.16.
K(2Fe+H2L)=58.08, K(2Fe+H2L+H)=62.0. Many other di-nuclear species.

C43H56N6O18 H6L (7965)
Methyl-2,3,4-tris-O-{N-[2,3-di(hydroxy)benzoyl-glycyl]-aminopropyl}-1-D-glucopyranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaClO4	25°C	0.10M	U		K1=41.38 K(FeL+H)=9.31 K(FeHL+H)=8.16 K(FeH2L+H)=7.05 K(FeH3L+H)=3.49	2001DHa (107012)	3235

K(FeH4L+H)=3.56. K1 by spectrophotometry.

C44H26N4Cl4 H2L CAS 22112-77-2 (1783)
5,10,15,20-4-Tetra-(4-chlorophenyl)porphine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	U	M	K(FeLCl+N-MeImidazole)=1.3 K(FeLCl+2(N-MeImidazole))=2.85	1976WLa (107041)	3236

Medium: CHCl3

C44H26N4F4 H2L CAS 37095-43-5 (1782)
5,10,15,20-Tetra-(4-fluorophenyl)porphine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	U	M	K(FeLCl+N-MeImidazole)=1.1 K(FeCl+2(N-MeImidazole))=3.00	1976WLa (107046)	3237

Medium: CHCl3

C44H30N4 H2L Tetraphenylpor. CAS 917-23-7 (1781)
5,10,15,20-Tetraphenyl-21H,23H-porphine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	vlt	non-aq	25°C	100%	U	M	K(FeL+2py=FeL(py)2)=2.2 K(FeL+2A=FeLA2)<-0.8 K(FeL+2B=FeLB2)=2.4 K(FeL+2C=FeLC2)=7.2	1996NSa (107063)	3238

Method: cyclic voltammetry. Medium: DMF. A=4-Cyanopyridine,

C=3,4-Dimethylpyridine. D=N-Methylimidazole. Also data for other porphyrins.

Fe+++	kin	non-aq	25°C	100%	U		K1=3.1	1985FTa (107064)	3239
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Medium: pyridine. In 3,5-dichloropyridine K1=-2.6

Fe+++	nmr	non-aq	-25°C	100%	U	M	K(FeClL+2py)=0.97 K(FeClL+2A)=1.73	1976SMa (107065)	3240
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py=pyridine, A=4-Methylpyridine. Medium=CDCl3. Reference also contains many data on ternary complexes of porphin with Fe(III) and other N-donor ligands

 Fe+++ sp NaNO3 25°C 0.05M U 1977PLa (107104)3248
 *K1(FeL(H2O)2)=-4.7
 *B2(FeL(H2O)2)=-11.2
 K(2FeL=O(FeLOH)2)=5.95

C45H42N4O36S9 15L TBPAS CAS 156820-73-4 (9076)
 5',5'',5'''-[Nitrilotris(2,1-ethanediyiminocarbonyl)]tris[2,6'-dihydroxy-1,1'-biphe
 ny]-3,3',5-trH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.10M	C		K1=28.8 K(Fe+H7L=FeH6L+H)=20.0 K(Fe+H7L=FeH4L+3H)=49.0 *K(FeH4L)=-2.4 *K(FeH3L)=-4.3	1994SMc (107216)	3249

*K(FeH2L)=-6.3; *K(FeHL)=-7.2. By competition with edta, K1=28.6.

C45H42N4O36S9 15L CAS 208399-32-0 (7755)
 N,N',N''-Nitrilotris(2,1-ethanediyiminocarbonyl)tris[2,6'-dihydroxy-1,1'-biphenyl-3
 ,3',5triHSO3]H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	gl	NaClO4	25°C	0.10M	C		K1=30.03 B(FeHL)=39.11 B(FeH2L)=46.26 B(FeH3L)=51.86 B(FeH4L)=56.49.	1998BBg (107218)	3250

B(FeH-1L)=20.26. Data also determined spectrophotometrically:

B(FeH3L)=51.8, B(FeH5L)=60.0, B(FeH6L)=61.9.

C45H48N4O33S9 TBPANS CAS 156820-75-6 (9077)
 5',5'',5'''-[Nitrilotris(2,1-ethanediyiminomethylene)]tris[2,6'-dihydroxy-1,1'-biph
 enyl]-3,3',5-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	NaClO4	25°C	0.10M	C		K1=31.6 K(Fe+H10L=FeH9L+H)=18.2 K(Fe+H10L=FeH8L+2H)=83.55 *K(FeH8L)=-4.3 *K(FeH7L)=-4.67	1994SMc (107229)	3251

*K(FeH5L)=-4.75; *K(FeH4L)=-7.86, *K(FeH3L)=-9.1, *K(FeH2L)=-10.1,

*K(FeHL)=-11.1. By competition with edta, K1=31.9.

C48H38N4 H2L CAS 14527-51-6 (1780)
 5,10,15,20-Tetrakis-(4-methylphenyl)-21H,23H-porphine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	nmr	non-aq	25°C	100%	U T M			1976SMa (107349)	3252

$K(\text{FeClL}+2\text{A})=3.5$
 $K(\text{FeBrL}+2\text{A}) > 6.0$
 $K(\text{FeIL}+2\text{A}) > 6.0$

Medium: CDCl_3 . A=1-Methyl-benzimidazole. At -34 C: $K(\text{FeBr}_2\text{L}+2\text{A})=3.4$

Fe+++	sp	non-aq	25°C	100%	U M			1976WLa (107350)	3253
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$K(\text{FeLCl}+\text{N-MeImidazole})=1.3$
 $K(\text{FeLCl}+2(\text{N-MeImidazole}))=3.42$

Medium: CHCl_3

C48H38N4O4 H2L CAS 22122-78-3 (1788)
 5,10,15,20-Tetra-(4-Methoxyphenyl)porphine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	U M			1976WLa (107355)	3254

$K(\text{FeLCl}+\text{N-MeImidazole})=1.6$
 $K(\text{FeLCl}+2(\text{N-MeImidazole}))=3.6$

Medium: CHCl_3

C51H40N6O L ImTPP CAS 164173-28-8 (7949)
 5-[2-(4-(1-Imidazolyl)butoxyl)phenyl]-10,15,20-triphenylporphyrin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	sp	non-aq	25°C	100%	C T HM			1995JHa (107467)	3255

$K(\text{FeLCl}+\text{Im})=5.41$
 $K(\text{FeLCl}+2\text{Im})=9.88$
 $K(\text{FeLCl}+2,3-(\text{CH}_3)_2\text{py})=0.587$
 $K(\text{FeLCl}+3,5-(\text{CH}_3)_2\text{py})=1.54$

Medium: CHCl_3 . Data for 25-44 C. $K(\text{FeLClpy})=1.25$, $K(\text{FeLCl}+4-\text{CH}_3\text{py})=1.50$.
 $\text{DH}(\text{FeLCl}+\text{Im})=-137 \text{ kJ mol}^{-1}$, $\text{DS}=-356 \text{ J K}^{-1} \text{ mol}^{-1}$; $\text{DH}(\text{FeLCl}+2\text{Im})=-184$.

C51H48S9 H3L (6818)
 Tris((4,6-dimethyl-3-mercaptophenyl)thiol)-2,4,6-tris(p-tolylthio)benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Fe+++	nmr	non-aq	24°C	100%	U HM			1990WSa (107468)	3256

$K(\text{Fe}_4\text{S}_4\text{LCl}+3\text{A})=2.58$

Medium: CD_3CN . $\text{DH}=-95.0 \text{ kJ mol}^{-1}$. $\text{DS}=-280 \text{ J K}^{-1} \text{ mol}^{-1}$.
 A: MeCN.

Fe+++	nmr	non-aq	24°C	100%	U M			1990WSa (107469)	3257
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$K(\text{Fe}_4\text{S}_4\text{LCl}+3\text{A})=3.15$

Medium: CD_3CN . A=EtCN. For A=t-BuCN: $K=4.15$, $\text{DH}=-110 \text{ kJ mol}^{-1}$, $\text{DS}=310 \text{ J K}^{-1} \text{ mol}^{-1}$
 For A=C₆H₁₁CN: $K=4.48$; 2,6-Me₂C₆H₃CN: $K=5.69$

C52H46N4O12S4 H4L (6861)
5,10,15,20-Tetrakis(2,6-dimethyl-3-sulfonatophenyl)porphin;

Fe+++	gl	mixed	25°C	50%	C	1998BBa (107531)3260
						K(Fe+H3L+2H)=67.75
						K(Fe+H3L+3H)=74.65
						K(Fe+H3L+4H)=82.46
						K(Fe+H3L+5H)=89.08

C55H74N4O5	H2L	Phaeophytin a	CAS 603-17-8 (8503)
3-Phorbinepropanoic acid...;			

C63H102N12O24 L CAS 341035-19-6 (8787)
 1,3,5-Benzenetris[carbonylimino(1-oxo-hexanediyl)]tris[N-hydroxyalanyl-6-aminohexanoyl-N-hydroxy-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	KNO3	25°C	0.10M	C				2001TSa (107728)	3263
								K(FeL+H)=2.36 K(Fe2L+H)=3.11		

K(FeL+H2edta+H=Fe(edta)+H3L)=7.18.

Also data for homologous hydroxamate ligands.

C70H89N15O18S2Fe H4L CAS 122801-25-6 (7667)
 N-Acetylmicroperoxidase-8;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaCl	25°C	0.10M	C	HM			1999MMa (107841)	3264
								K(FeL+imidazole)=4.076 K(FeL+CN)=6.76 K(FeL+py)=2.62 K(FeL+gly)=3.44		

Data for addition of many substituted pyridines, imidazoles, amines and aminoacid esters. DH and DS values for alkyl- and cyanopyridines.

C72H58N12O4 H2L (5854)
 meso-5,10,15,20-Tetrakis(2-(N-methylnicotinamido)phenyl)-21H,23H-porphin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaNO3	25°C	0.10M	U	M			1993MFa (107843)	3265
								Keff(FeL+2CN)=14.6		

At pH 9.61. At pH 10.2 Keff(FeL+2CN)=14.7

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	sp	NaNO3	25°C	0.10M	M	I			1988Mwa (107844)	3266
								*K(FeL(H2O)2)=-6.09 *K(FeLH2O(OH))=-10.28		

Data also for I=0.05, 0.25, 0.50, and 1.0 mol L-1 NaNO3

and for (a)4 isomer at I=0.01 mol L-1

Polymer DNA (4185)
 Deoxyribonucleic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Fe+++	kin	oth/un	25°C	0.0	U	H			1965KYb (108149)	3267
								K'=5.11(rat intestine & liver)		

DH=0 kJ mol-1, DS=96 J K-1 mol-1. See reference for definitions

Polymer Fulvic acid (1523)

Fulvic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	KNO3	25°C	0.10M	U				1998DMb (108179)	3268
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K1eff=5.0

Method: fluorescence quenching. Medium: pH 4.0.

Fulvic acid extracted from sewage sludge.

Fe+++	gl	NaClO4	25°C	0.10M	U				1974RMc (108180)	3269
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K1eff=5.38

Polymer L (3532)

Human transferrin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	sp	KNO3	25°C	0.10M	C				1994HCa (108209)	3270
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Keff(Fe+HCO3L)=21.44

Keff(FeHCO3L+Fe)=20.34

Keff(Fe+L)=11.4

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

Fe+++	kin	KCl	25°C	0.20M	U				1993CFa (108210)	3271
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K(Fe(NTA)+L)=-5.0

*K(Fe(NTA)L)=-6.35

For binding at the C-terminal site of transferrin.

Fe+++	sp	oth/un	25°C	0.10M	U				1987MSc (108211)	3272
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Keff1=22.7

Keff2=22.1

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

Polymer Hyaluronic acid CAS 9004-61 9 (7143)

Hyaluronic acid, copoly(b-glucuronic acid - b-N-acetylglucosamine); (C18H28NO11)n

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++	gl	KNO3	25°C	0.10M	C				2002Mca (108252)	3273
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K(Fe+H-1L)=8.2

K(Fe+2H-1L)=16.1

B(Fe2L2)=6.7

Polymer (6949)

Mytilis edulis foot protein 1;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Fe+++ vlt NaCl 25°C 0.10M U 1994TLA (108263)3274

Keff(Fe+L)=40.1

At pH 7.0 in 5 mM Bis(2-hydroxyethyl)iminotris(hydroxymethyl)methane.

Dala also for many component polypeptides

Polymer H3L Cox2000 CAS 400078-81-1 (9021)

Polyether-polymer;

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

Fe+++ gl NaCl04 25°C 0.10M C K1=32.12 2002IBb (108327)3275

B(FeHL)=34.24

B(FeH4L)=38.98

Polymer (6896)

Polymaleic acid-methacrylic acid copolymer; (-C4H2O3.CH2.C(CH3)COOH-)n

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

Fe+++ dis NaCl 25°C 0.10M U 1993KHa (108348)3276

K1eff=9.5

Method: dialysis; pH=8 [Fe]=0.00005 M

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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
R or IUP=R signifies EVALUATION RATING = Recommended by IUPAC

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