

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 24 experiments for

(no ligands specified)

Metal : Ra++

(no references specified)

(no experimental details specified)

e- HL Electron (442)

Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ra++	oth	none	25°C	0.0	U			1952LAb (865)	1

K(Ra+2e)=-98.6(-2920 mV)

Method:combination of thermodynamic data

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

Sulfate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ra++	sol	none	25°C	0.0	M		K1=2.76	1998PKb (16511)	2

Kso(RaS04)=-10.21

Application of Pitzer equations to literature data for the solubility of RaS04 in H2S04.

Ra++	oth	none	25°C	0.00	U			1985LMa (16512)	3
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Kso(RaS04)=-10.26

Derived from literature data

Ra++	sol	oth/un	20°C	0.0	U			1933NTa (16513)	4
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Kso(RaL)=-10.37

Ra++	sol	oth/un	25°C	dil	U T			1923B0a (16514)	5
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Kso(RaL)=-14.38

Kso=-13.62(45 C) ?

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
Ra++	ix	oth/un	25°C	0.16M	U		K1=0.89	1950SRa (24069)	6

Ra++	ix	oth/un	25°C	0.16M	U		K1=1.9	1933CCa (24070)	7
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C4H4O4 H2L Fumaric acid CAS 110-17-8 (289)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ra++	ix	oth/un	25°C	0.16M	U		K1=1.6	1950SRa (29216)	8

C4H4O5			H2L		Oxobutanedioic		CAS 328-42-7	(1733)	
2-Oxosuccinic acid, Oxalacetic acid; HOOC.CH2.CO.COOH									
Ra++	ix	oth/un	25°C	0.16M	U		K1=0.16	1950SRa (29280)	9

C4H6O4			H2L		Succinic acid		CAS 110-15-6	(112)	
1,4-Butanedioic acid; HOOC.CH2.CH2.COOH									
Ra++	ix	oth/un	25°C	0.16M	U		K1=1.0	1950SRa (30032)	10

C4H6O5			H2L		Malic acid		CAS 617-48-1	(393)	
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOC.CH2.CH(OH).COOH									
Ra++	ix	oth/un	25°C	0.16M	U		K1=0.95	1954SCa (30712)	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									
Ra++	ix	oth/un	25°C	0.16M	U		K1=1.2	1950SRa (31344)	13

C6H8O7			H3L		Citric acid		CAS 77-92-9	(95)	
2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCCH2.CH(OH)(COOH).CH2COOH									
Ra++	ix	oth/un	25°C	0.16M	U		K1=2.36	1954SCa (46242)	14
Ra++	ix	oth/un	25°C	0.16M	U		K1=2.0	1948SRa (46243)	15
Ra++	ix	alc/w	25°C	38%	U		K1=2.4	1930CCa (46244)	16
Medium: 38% EtOH, 0.16 M									

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
Ra++	ix	oth/un	25°C	0.16M	U			1950SRa (55042)	17
K(Ra+HL)=1.9									

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
Ra++	ix	NaCl	20°C	0.10M	U	T	K1=7.07	1978ANa (74123)	18
IUPAC evaluation									

Ra++	dis	NaClO4	25°C	0.10M	U		K1=7.5	1968SKa (74124)	19

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
Ra++	dis	NaClO4	25°C	0.10M	U		K1=5.6	1968SKa (75485)	20

C12H24O6		L		18-Crown-6			CAS 17455-13-9 (577)		
1,4,7,10,13,16-Hexaoxacyclooctadecane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ra++	vlt	oth/un	25°C	0.10M	C		K1=3.43	1985SKd (83590)	21
Method: radiopolarography. Medium: 0.10 M LiCl.									

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
Ra++	dis	NaClO4	25°C	0.10M	U		K1=8.3	1968SKa (88766)	22

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
Ra++	dis	NaClO4	25°C	0.10M	U		K1=8.5	1968SKa (89374)	23

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
Ra++	dis	NaClO4	25°C	0.10M	U		K1=7.7	1968SKa (89926)	24

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EXPLANATORY NOTES

DATA Flags are :-

T Data at other TEMPERATURES

EVALUATION Flags are :-

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

END Experiments recorded for Dr. M. Filella, University of Geneva
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