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TABLE 1181

TABLE OF ISOTACHOPHORETIC INDICES

I SIMULATED QUALITATIVE AND QUANTITATIVE INDICES OF 287 ANIONIC SUBSTANCES IN THE RANGE pH 3–10

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SUMMARY

A simulation of isotachophoretic equilibria has been applied to 287 anions, evaluating R_E indices for qualitative determination and time-based zone lengths for quantitation under 31 leading electrolyte conditions in the range pH 3–10, using eight different buffers. The R_E values may be useful for correcting asymmetric potentials of sensing electrodes for precise R_E measurement, assessing the separability of samples and estimating the optimum separation conditions. The zone lengths for 10-nmol samples obtained at a driving current of 100 μA may be useful for quantitation.

INTRODUCTION

A unique feature of capillary isotachophoretic apparatus commonly used is that there are no packing materials in the separation column. The isotachophoretic behaviour in such a free electrolyte system can be analyzed theoretically and the observed isotachopherograms can be simulated using a few physico-chemical constants of the sample components and appropriate separation conditions[1,2]. In previous papers we have described applications of this simulative technique to analytical problems such as the assessment of the separability of samples at different pH values[2], estimation of the optimum separation conditions[2] and quantitation without a calibration line[3]. In principle, the separability of samples by isotachophoresis is determined by the effective mobilities of the sample components, which are closely related to their absolute mobilities and pK_a values and to the pH of the leading electrolyte, pH_L, buffered by an appropriate counter ion. To ensure that there is sufficient difference between the effective mobilities of the sample components, a complex-forming technique and a solvent effect are also utilized[4].

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In the present work, the qualitative and quantitative indices of 287 anions are simulated under 31 aqueous electrolyte conditions in the range pH 3–10 by considering the pH dependence of the effective mobility. These indices, *i.e.*, R_E and the time-based zone length, t, can be used as a data base for analytical purposes and for correction of asymmetric potential in the measurement of R_E[5], qualitative identification without addition of a standard and conversion of R_E into other qualitative indices and *vice versa*

SIMULATION CONDITIONS

The pH of the leading electrolyte, pH_L, was varied in the range 3–10 (0.25 pH units per step) using eight kinds of buffer ions: β-alanine (pH_L = 3–4); ε-aminocaproic acid (4–4.75); creatinine (4.75–5.25); histidine (5.5–6.25); imidazole (6.5–7.25); tris(hydroxymethyl)aminomethane (Tris) (7.5–8.25); 2-amino-2-methyl-1,3-propanediol (amediol) (8.5–9.25); ethanolamine (9.5–10). The absolute mobilities, m_0, and the dissociation constants, pK_a, of the buffers used are summarized in Table I. The absolute mobility of cationic β-alanine ($36.7 \cdot 10^{-5}$ cm^2 V^{-1} sec^{-1}) obtained by conductivity measurement was different from the previously used value[5] of $31.0 \cdot 10^{-5}$ cm^2 V^{-1} sec^{-1} obtained by analysing the step height of anionic β-alanine and assuming the cationic m_0 to be equal to that of the anionic m_0. The leading ion was 0.01 *M* chloride and the driving current was 100 μA. Table II shows the simulation conditions, the simulated concentration of buffer, the effective mobility of the buffer and leading ion, the specific conductivity and the potential gradient of the leading zones. For simulation of the latter the inner diameter of the separation column was assumed to be 0.5 mm. The isotachophoretic zone velocity at each pH_L condition is also shown in Table II. This velocity can be used to estimate the time needed for detecting the first sample zone.

The m_0 and pK_a values of the 287 substances are mainly literature values. For about 80 substances, isotachophoretically evaluated constants were used. It should be noted that the correction of m_0 of β-alanine and revision of the computer program caused little changes in the m_0 and pK_a values evaluated previously[5]. For a part of the samples, especially for isomers of benzene derivatives, pK_a could be found in the

TABLE I

PHYSICO-CHEMICAL CONSTANTS OF BUFFERS USED IN SIMULATION (25°C)

m_0 = Absolute mobility (cm^2 V^{-1} sec^{-1} × 10^5) pK_a = thermodynamic acid dissociation constant. The absolute mobilities were obtained isotachophoretically, and the pK_a values were taken from the literature

pH_L range	*Buffer*	*pK_a*	*m_0*
3.00–4.00	β-Alanine	3.552	36.7
4.00–4.75	ε-Aminocaproic acid	4.373	28.8
4.75–5.25	Creatinine	4.828	37.2
5.50–6.25	Histidine	6.04	29.6
6.50–7.25	Imidazole	7.15	52.0
7.50–8.25	Tris	8.076	29.5
8.50–9.25	Amediol	8.78	29.5
9.50–10.0	Ethanolamine	9.498	44.3

TABLE II

SIMULATED EFFECTIVE MOBILITIES AND CONCENTRATION OF LEADING ZONE CONSTITUENTS (25°C)

pH_L = pH of leading electrolyte, $\bar{m}_L$ = effective mobility ($cm^2\ V^{-1}\ sec^{-1} \times 10^5$) of leading ion ($Cl^-$), m_0 of Cl^- being 79.08 $10^{-5}\ cm^2\ V^{-1}\ sec^{-1}$; $C'_{B,L}$ = total concentration (mM) of buffer ion; $\bar{m}_{B,L}$ = effective mobility ($cm^2\ V^{-1}\ sec^{-1} \times 10^5$) of buffer ion, the counter direction being indicated by a negative sign; κ_L = specific conductivity ($S\ cm^{-1}$) of leading zone, E_L = potential gradient ($V\ cm^{-1}$) of leading zone at a driving current of 100 μA (I.D. of narrow bore tube 0.5 mm); v = isotachophoretic zone velocity ($cm\ sec^{-1} \times 10^3$)

Buffer	pH_L	$\bar{m}_L$	$C'_{B,L}$	$\bar{m}_{B,L}$	κ_L	E_L	v
β-Alanine	3.00	74.64	11.28	−26.48	1.348	37.77	28.20
	3.25	74.61	13.68	−22.88	1.212	41.98	31.32
	3.50	74.57	17.43	−18.43	1.137	44.80	33.40
	3.75	74.51	23.79	−13.70	1.094	46.56	34.69
	4.00	74.44	34.94	−9.40	1.069	47.63	35.46
ε-Aminocaproic acid	4.00	74.60	13.68	−18.41	0.997	51.09	38.12
	4.25	74.58	16.70	−15.15	0.982	51.84	38.65
	4.50	74.48	22.01	−11.52	0.974	52.29	38.94
	4.75	74.40	31.42	−8.08	0.969	52.57	39.11
Creatinine	4.75	74.57	17.50	−19.20	1.050	48.51	36.18
	5.00	74.52	23.37	−14.39	1.047	48.65	36.25
	5.25	74.45	33.80	−9.95	1.045	48.74	36.29
Histidine	5.50	74.63	12.59	−20.82	0.974	52.28	39.02
	5.75	74.59	14.62	−17.93	0.973	52.33	39.03
	6.00	74.53	18.22	−14.39	0.972	52.37	39.03
	6.25	74.46	24.62	−10.65	0.972	52.42	39.03
Imidazole	6.50	74.67	12.02	−40.08	1.202	42.97	32.08
	6.75	74.66	13.59	−35.44	1.185	42.97	32.08
	7.00	74.63	16.38	−29.40	1.185	42.98	32.08
	7.25	74.60	21.35	−22.56	1.185	42.99	32.07
Tris	7.50	74.63	12.39	−21.08	0.972	52.38	39.10
	7.75	74.60	14.26	−18.32	0.972	52.40	39.09
	8.00	74.54	17.57	−14.87	0.971	52.43	39.08
	8.25	74.47	23.46	−11.14	0.971	52.45	39.06
Amediol	8.50	74.59	14.74	−17.73	0.972	52.38	39.07
	8.75	74.53	18.42	−14.19	0.972	52.38	39.04
	9.00	74.45	24.99	−10.46	0.973	52.37	38.99
	9.25	74.37	36.67	−7.14	0.973	52.32	38.91
Ethanolamine	9.50	74.58	19.12	−21.31	1.119	45.53	33.95
	9.75	74.53	26.25	−15.56	1.124	45.32	33.77
	10.00	74.47	39.01	−10.51	1.133	44.94	33.46

literature but m_0 could not. In such cases, the m_0 values were assumed equal to those of compounds of similar structure or similar molecular weight.

The calculations were carried using a SORD microcomputer M223 Mk III

equipped with two 1 MB floppy disk drivers. The results were filed on a floppy disk. To calculate 8897 (287 × 31) R_E values required *ca.* 10 h.

USE OF INDICES

The names of the 287 anionic substances simulated are arranged in alphabetical order in Table III. The simulated results are summarized in Table IV together with values of m_0 and pK_a, the molecular formula and molecular weight. The negative signs of m_0 for anions are omitted except for a few amino acids. Also listed in Table IV are the ratio, R_E, of the potential gradient of the sample zone, E_S, to that of the leading zone, E_L, the time-based zone length, t (sec), the effective charge, $-Z$, and the pH of the sample zone, pH_S, at each pH_L.

I. Correction of asymmetric potential

When a potential gradient detector is used, the actual baseline for the measurement of the step heights of the leading, h_L, and the sample zone, h_S, sometimes drifts due to an asymmetric potential at the sensing electrodes. This drift sometimes results in a significant error in the observed R_E values. In such cases, the simulated R_E values of samples with well defined m_0 and pK_a can be obtained from an evaluation of the drifted step height, Δh. In Table IV, the R_E values of substances marked with (S), R_E (std), are useful as internal standard indices. The Δh can be evaluated as

$$\Delta h = [h_{std} - h_L \cdot R_E(std)]/[R_E(std) - 1] \quad (1)$$

where h_{std} is the apparent step height of the zone of the internal standard and h_L that of the leading zone. Using Δh, the R_E values of the sample components can be corrected

$$R_E = E_S/E_L = (h_S + \Delta h)/(h_L + \Delta h) \quad (2)$$

where h_S is the observed step height of the sample. Examples of this mode of correction were reported in ref. 5.

II. Assessment of separability

From Table IV, one can assess the separability of the given samples by comparing the R_E indices at the different pH_L values. According to our experience, when the R_E values of two samples coincided within *ca.* 0.15, their separation was difficult or impossible. The linear interpolation of adjacent R_E values gives approximate R_E values at any pH_L using the same buffer: *e.g.*, the R_E values of acetic acid at pH_L 3 and 3.25 are 8.876 and 7.444, then the R_E value at pH_L 3.125 can be estimated as $8.876 - (8.876 - 7.444) \times 0.125/0.25 = 8.160$. The exactly simulated value is 8.090 and the discrepancy is thus slight.

For the estimation of pH_L and the selection of a terminator for optimum separation, the pH_L should be selected so as to result in sufficient difference between the R_E values of the samples. A plot of R_E against pH_L is useful for this purpose. Fig. 1 shows the dependence on pH_L of the R_E values of benzoate (No. 12 in Table IV), cacodylate (27), caproate (29), chlorate (32), citrate (57), phenolate (229) and N-tris(hydroxymethyl)methyl-3-aminopropanesulphonic acid (TAPS) (262). In the range

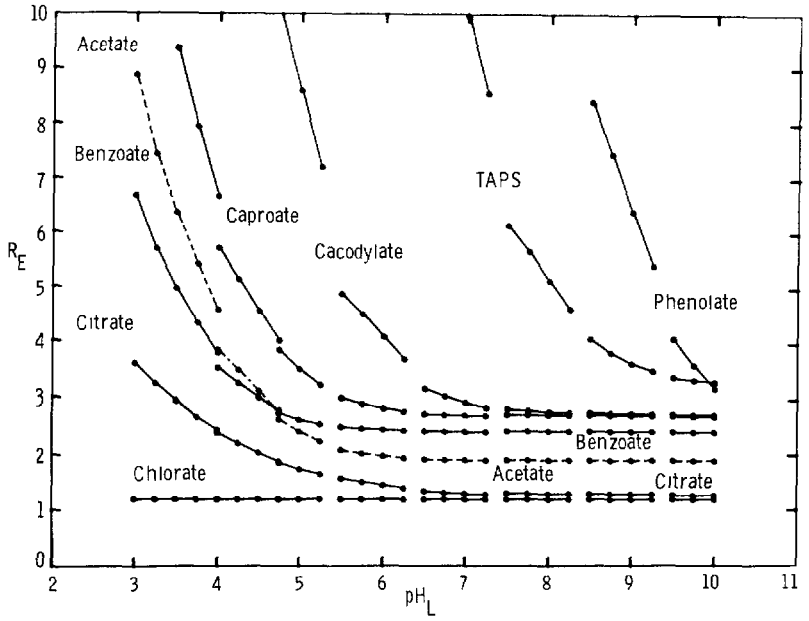

Fig 1 Effect of pH_L and the buffers on the simulated R_E values of chlorate, citrate, benzoate, acetate, caproate, cacodylate, TAPS and phenolate ions at the isotachophoretically steady state The leading ion was 10 m*M* Cl^- The buffers used were β-alanine (pH_L = 3–4), ε-aminocaproic acid (4–4 75), creatinine (4 75–5 25), histidine (5 5–6 25), imidazole (6 5–7 25), tris(hydroxymethyl)aminomethane (7 5–8 25), amediol (8 5–9 25), and ethanolamine (9 5–10)

pH_L 5 5–6 25 histidine buffer, chlorate, citrate, acetate, benzoate and caproate ions can easily be separated using cacodylate ion as terminator. At intermediate pH_L values of 4.5–4.75 (ε-aminocaproic acid buffer), benzoate and acetate ions may form a mixed zone. In the low pH_L range 3–4 the samples can easily be separated, however, cacodylate ion is not suitable as the terminator as the R_E values are too large, caprylate (30) may be suitable. The separability is strongly dependent on the sample amount For the separation of large amounts of samples, a high loading of leading ion is necessary, even when the difference between R_E values is larger than *ca.* 0.15 (the latter is only a measure of the separation)

III. Qualitative identification

For the identification of unknown samples, the method of standard addition has usually been employed. Instead qualitative identification can be achieved by comparing the observed and simulated R_E values, if the R_E values are measured carefully using an internal standard. At least, the possible candidates for the components in actual samples can be limited to several kinds, and their number can be reduced further by considering the R_E values measured at other pH_L values. This procedure can be performed rapidly by computer-sorting of samples having similar R_E values to those observed.

IV. Quantitation

When the separated samples are identified, their amounts can be determined

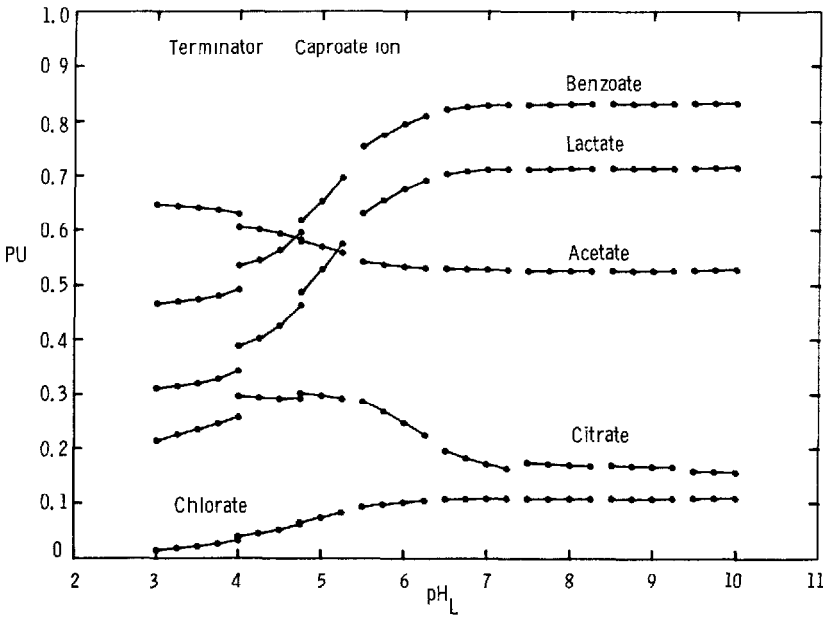

Fig 2 Effect of pH_L and the buffers on the simulated PU values of chlorate, citrate, lactate, benzoate and acetate ions at the isotachophoretically steady state The terminator is caproate ion For the electrolyte systems, see Fig. 1

using the simulated and observed zone lengths. In Table IV the simulated time-based zone lengths, t(sec), are listed for 10-nmol samples at a driving current of 100 μA. If the observed time-based zone length is t_{obs}(sec) at a driving current of I (μA), the sample amount, n_S(nmol), can be expressed:

$$n_S = t_{obs} I/10\ t \tag{3}$$

For example, at a driving current of 50 μA and pH_L 6, the time-based zone length of acetic acid was 50 sec. The sample amount can easily be estimated as $50 \times 50/10 \times 16.22 = 15.4$ nmol, and the slope of the calibration line, $I/10t$, is 0.308.

V. Conversion of R_E into different qualitative indices

Besides R_E, several qualitative indices have been proposed such as relative step height[4], IRM[6], PU[7], PR[8], RU (= IRM $\times$ 100)[9] and SU (= PU $\times$ 100)[9]. The definition of IRM is the same as R_E and PR = $1/R_E$. PU is defined as

$$PU = (h_S - h_L)/(h_T - h_L) \tag{4}$$

where h_T is the step height of the terminating zone. The R_E values of samples can be converted into PU values using the R_E value of the sample, R_E(S), and terminating ion, R_E(T):

$$PU = [R_E(S) - 1]/[R_E(T) - 1] \tag{5}$$

Fig. 2 shows the pH dependence of PU values for acetate (1), benzoate (12), chlorate (32), citrate (57) and lactate (184) using R_E values of caproate ion (29) as the terminator. A similar conversion of the relative step heights of 65 anions[4] to R_E values has been reported in ref. 5

Thus, the simulated qualitative and quantitative indices can be utilized for several analytical purposes, although the number of simulated samples is limited. It should be noted that the accuracy of the simulated indices depends mainly on the physico-chemical constants of the samples and buffers used. The present table is as yet in an experimental stage, but by continuous revision it will be used widely in future as a data base for isotachophoresis We await the critical comments of users.

Similar tables for amino acids and cations will be submitted in due course.

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(For Tables III and IV, see pp. D8–D106, references to Table IV are listed on p D106)

TABLE III

ANIONIC SUBSTANCES LISTED ALPHABETICALLY IN TABLE IV

No.	Samples	No.	Samples
1	ACETIC ACID (S)	49	2-CHLOROPROPIONIC ACID
2	ACRYLIC ACID	50	3-CHLOROPROPIONIC ACID
3	ADIPIC ACID	51	CHLOROUS ACID
4	ALLYLACETIC ACID	52	5-CHLOROVALERIC ACID
5	o-AMINOBENZOIC ACID	53	CHROMIC ACID
6	p-AMINOBENZOIC ACID	54	CINNAMIC ACID
7	ARSENIC ACID	55	cis-CINNAMIC ACID
8	ASPARTIC ACID	56	CITRACONIC ACID
9	ASPIRIN	57	CITRIC ACID (S)
10	AZELAIC ACID	58	CRESOL
11	BENZENESULFONIC ACID	59	m-CRESOL
12	BENZOIC ACID (S)	60	p-CRESOL
13	BENZYLASPARATIC ACID	61	CROTONIC ACID
14	BROMIC ACID (S)	62	CYANIC ACID
15	BROMOACETIC ACID (S)	63	CYANOACETIC ACID
16	m-BROMOBENZOIC ACID	64	m-CYANOBENZOIC ACID
17	o-BROMOBENZOIC ACID	65	CYCLOBUTANE-1,1-DICARBOXYLIC ACID
18	p-BROMOBENZOIC ACID	66	CYCLOHEXANE-1,1-DICARBOXYLIC ACID
19	2-BROMOBUTYRIC ACID	67	CYCLOPENTANE-1,1-DICARBOXYLIC ACID
20	4-BROMOBUTYRIC ACID	68	DECYLSULFONIC ACID
21	o-BROMOPHENYLACETIC ACID	69	DIBROMOFLUOROACETIC ACID
22	2-BROMOPROPIONIC ACID	70	2,3-DIBROMOPROPIONIC ACID
23	5-BROMOVALERIC ACID	71	DICHLOROACETIC ACID (S)
24	o-t-BUTYLBENZOIC ACID	72	DICHLOROFLUOROACETIC ACID
25	p-t-BUTYLBENZOIC ACID	73	2,4-DICHLOROPHENOL
26	BUTYRIC ACID (S)	74	2,4-DICHLOROPHENOXYACETIC ACID
27	CACODYLIC ACID	75	DICHROMIC ACID
28	CAPRIC ACID	76	DIETHYLACETIC ACID
29	CAPROIC ACID (S)	77	DIETHYLMALONIC ACID
30	CAPRYLIC ACID	78	DIFLUOROACETIC ACID
31	CARBONIC ACID	79	2,4-DIHYDROXYBENZOIC ACID
32	CHLORIC ACID (S)	80	2,5-DIHYDROXYBENZOIC ACID
33	2-CHLORO-3-OH-BUTYRIC ACID	81	2,6-DIHYDROXYBENZOIC ACID
34	CHLOROACETIC ACID	82	3,4-DIHYDROXYBENZOIC ACID
35	m-CHLOROBENZOIC ACID	83	3,5-DIHYDROXYBENZOIC ACID
36	o-CHLOROBENZOIC ACID	84	DIHYDROXYTARTARIC ACID
37	p-CHLOROBENZOIC ACID	85	2,3-DIMETHYLBENZOIC ACID
38	2-CHLOROBUTYRIC ACID	86	2,4-DIMETHYLBENZOIC ACID
39	3-CHLOROBUTYRIC ACID	87	2,5-DIMETHYLBENZOIC ACID
40	2-CHLOROCROTONIC ACID	88	2,6-DIMETHYLBENZOIC ACID
41	3-CHLOROCROTONIC ACID	89	3,4-DIMETHYLBENZOIC ACID
42	CHLORODIBROMOACETIC ACID	90	3,5-DIMETHYLBENZOIC ACID
43	CHLORODIFLUOROACETIC ACID	91	DIMETHYLMALONIC ACID
44	2-CHLOROISOCROTONIC ACID	92	2,6-DINITROBENZOIC ACID
45	m-CHLOROPHENOL	93	3,5-DINITROBENZOIC ACID
46	o-CHLOROPHENOL	94	2,3-DINITROPHENOL
47	p-CHLOROPHENOL	95	2,4-DINITROPHENOL
48	p-CHLOROPHENYLACETIC ACID	96	2,5-DINITROPHENOL

No.	Samples	No.	Samples
97	2,6-DINITROPHENOL	145	3-HYDROXY-o-TOLUIC ACID
98	3,4-DINITROPHENOL	146	3-HYDROXY-p-TOLUIC ACID
99	3,5-DINITROPHENOL	147	4-HYDROXY-m-TOLUIC ACID
100	DIPHENYLACETIC ACID	148	6-HYDROXY-o-TOLUIC ACID
101	DIPROPYLMALONIC ACID	149	m-HYDROXYBENZOIC ACID
102	DITHIONIC ACID	150	p-HYDROXYBENZOIC ACID
103	DITHIONOUS ACID	151	2-HYDROXYBUTYRIC ACID
104	DODECYLSULFONIC ACID	152	3-HYDROXYBUTYRIC ACID
105	ENANTHYLIC ACID	153	4-HYDROXYBUTYRIC ACID
106	o-ETHOXYBENZOIC ACID	154	m-HYDROXYCINNAMIC ACID
107	p-ETHOXYBENZOIC ACID	155	o-HYDROXYCINNAMIC ACID
108	o-ETHYLBENZOIC ACID	156	p-HYDROXYCINNAMIC ACID
109	p-ETHYLBENZOIC ACID	157	2-HYDROXYISOBUTYRIC ACID (S)
110	2-ETHYLBUTYRIC ACID	158	p-HYDROXYPHENYLACETIC ACID
111	ETHYLFUMARIC ACID	159	HYDROXYTRIMETHYLACETIC ACID
112	3-ETHYLGLUTARIC ACID	160	2-HYDROXYVALERIC ACID
113	ETHYLMALEIC ACID	161	4-HYDROXYVALERIC ACID
114	ETHYLMALONIC ACID	162	HYPOPHOSPHOROUS ACID (S)
115	ETHYLPROPYLMALONIC ACID	163	IODIC ACID
116	ETHYLSULFONIC ACID	164	IODOACETIC ACID
117	FLUOROACETIC ACID	165	m-IODOBENZOIC ACID
118	m-FLUOROBENZOIC ACID	166	o-IODOBENZOIC ACID
119	o-FLUOROBENZOIC ACID	167	p-IODOBENZOIC ACID
120	p-FLUOROBENZOIC ACID	168	4-IODOBUTYRIC ACID
121	FORMIC ACID (S)	169	m-IODOPHENYLACETIC ACID
122	FUMARIC ACID	170	o-IODOPHENYLACETIC ACID
123	GALLIC ACID	171	p-IODOPHENYLACETIC ACID
124	GLUCONIC ACID	172	3-IODOPROPIONIC ACID
125	GLUCURONIC ACID	173	5-IODOVALERIC ACID
126	GLUTACONIC ACID	174	ISOBUTYRIC ACID
127	GLUTAMIC ACID (S)	175	ISOCAPROIC ACID
128	GLUTARIC ACID	176	ISOCITRIC ACID
129	GLYCERIC ACID	177	ISOPHTHALIC ACID
130	GLYCOLIC ACID	178	o-ISOPROPYLBENZOIC ACID
131	GLYOXYLIC ACID	179	p-ISOPROPYLBENZOIC ACID
132	HIPPURIC ACID	180	ISOPROPYLMALONIC ACID
133	HYDROBROMIC ACID	181	ISOVALERIC ACID
134	HYDROCHLORIC ACID	182	ITACONIC ACID
135	HYDROCYANIC ACID	183	2-KETOGLUTARIC ACID
136	HYDROFLUORIC ACID (S)	184	LACTIC ACID (S)
137	HYDROGEN AZIDE	185	LAURYLSULFONIC ACID
138	HYDROGEN HEXAFLUOROPHOSPHIDE	186	LEVULINIC ACID
139	HYDROGEN SULFIDE	187	MALEIC ACID
140	HYDROIODIC ACID	188	MALIC ACID
141	2-HYDROXY-3-CHLOROBUTYRIC A.	189	MALONIC ACID (S)
142	2-HYDROXY-3-Cl-ISOBUTYRIC A.	190	MANDELIC ACID
143	2-HYDROXY-3-Cl-PROPIONIC A.	191	MES (S)
144	2-HYDROXY-m-TOLUIC ACID	192	MESACONIC ACID

No.	Samples	No.	Samples
193	MESOTARTARIC ACID	241	3-PROPYLGLUTARIC ACID
194	METHACRYLIC ACID	242	PROPYLMALONIC ACID
195	METHOXYACETIC ACID	243	PROPYLSULFONIC ACID
196	m-METHOXYBENZOIC ACID	244	PYRAZOLE-2,3-DICARBOXYLIC ACID
197	o-METHOXYBENZOIC ACID	245	PYROPHOSPHORIC ACID
198	p-METHOXYBENZOIC ACID	246	PYRUVIC ACID
199	p-METHOXYPHENYLACETIC ACID	247	SACCHARIN
200	METHYLETHYLMALONIC ACID	248	SALICYLIC ACID
201	METHYLMALONIC ACID	249	SEBACIC ACID
202	METHYLSULFONIC ACID	250	SELENIC ACID
203	2-NAPHTALENESULFONIC ACID	251	SELENIOUS ACID
204	NICOTINIC ACID	252	SELENOCYANIC ACID
205	NITRIC ACID	253	SORBIC ACID
206	2-NITRO-3-BROMOBENZOIC ACID	254	SUBERIC ACID
207	3-NITRO-2-BROMOBENZOIC ACID	255	SUCCINIC ACID (S)
208	3-NITRO-4-BROMOBENZOIC ACID	256	SULFAMIC ACID (S)
209	2-NITRO-3-CHLOROBENZOIC ACID	257	SULFANILIC ACID
210	3-NITRO-4-CHLOROBENZOIC ACID	258	m-SULFANILIC ACID
211	3-NITRO-5-CHLOROBENZOIC ACID	259	o-SULFANILIC ACID
212	m-NITROBENZOIC ACID	260	SULFURIC ACID
213	o-NITROBENZOIC ACID	261	SULFUROUS ACID
214	p-NITROBENZOIC ACID	262	TAPS
215	m-NITROPHENOL	263	TARTARIC ACID (S)
216	o-NITROPHENOL	264	TARTRONIC ACID
217	p-NITROPHENOL	265	TEREPHTHALIC ACID
218	NITROUS ACID	266	THIOACETIC ACID
219	OCTYLSULFONIC ACID	267	THIOCYANIC ACID
220	OROTIC ACID	268	THIOCYANOACETIC ACID
221	OXALIC ACID (S)	269	THIOGLYCOLIC ACID
222	OXALOACETIC ACID	270	THIOSULFURIC ACID
223	PELARGONIC ACID	271	p-TOLUENESULFONIC ACID
224	PERCHLORIC ACID (S)	272	m-TOLUIC ACID
225	PERIODIC ACID	273	o-TOLUIC ACID
226	PERMANGANIC ACID	274	p-TOLUIC ACID
227	PEROXYSULFURIC ACID	275	TRIBROMOACETIC ACID
228	PERRHENIC ACID	276	TRICHLOROACETIC ACID
229	PHENOL	277	TRICHLOROACRYLIC ACID
230	PHENOXYACETIC ACID	278	TRICHLOROLACTIC ACID
231	PHENYLACETIC ACID	279	TRIMETAPHOSPHORIC ACID
232	4-PHENYLBUTYRIC ACID	280	TRIMETHYLACETIC ACID (S)
233	2-PHENYLPROPIONIC ACID	281	TRIMETHYLACRYLIC ACID
234	3-PHENYLPROPIONIC ACID	282	2,4,6-TRIMETHYLBENZOIC ACID
235	PHOSPHORIC ACID (S)	283	TRIMETYLPYRUVIC ACID
236	PHOSPHOROUS ACID	284	VALERIC ACID
237	PHTHALIC ACID	285	VANILLIC ACID
238	PICRIC ACID	286	VINYLACETIC ACID
239	PIMELIC ACID	287	VINYLGLYCOLIC ACID
240	PROPIONIC ACID (S)		

TABLE IV

ISOTACHOPHORETIC INDICES OF 287 ANIONIC SUBSTANCES

1 ACETIC ACID (S)					C2H4O2		pHL	3.00	3.25	3.50
-1	42.4	4.756			60.05		RE	8.876	7.444	6.370
							t	21.01	20.13	19.51
							Z	0.206	0.247	0.289
							pHS	4.151	4.249	4.342
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.428	4.576	3.848	3.485	3.111	2.763	2.650	2.427	2.244	2.087	2.027
19.02	18.64	16.48	16.37	16.26	16.18	18.16	18.12	18.09	16.23	16.22
0.340	0.404	0.485	0.537	0.603	0.681	0.711	0.778	0.843	0.912	0.940
4.443	4.561	4.700	4.789	4.904	5.050	5.112	5.264	5.449	5.733	5.910
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.980	1.949	1.925	1.915	1.909	1.904	1.912	1.910	1.909	1.908	1.909
16.22	16.21	21.62	21.61	21.61	21.61	16.18	16.18	16.19	16.20	16.20
0.962	0.978	0.988	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
6.122	6.355	6.651	6.887	7.132	7.380	7.593	7.841	8.091	8.340	8.591
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 1				
1.908	1.907	1.906	1.902	1.901	1.899					
16.23	16.27	16.34	20.09	20.36	20.85					
1.000	1.000	1.000	1.000	1.000	1.000					
8.842	9.092	9.343	9.626	9.878	10.133					

2 ACRYLIC ACID					C3H4O2		pHL	3.00	3.25	3.50
-1	42.7	4.258			72.06		RE	5.663	4.816	4.183
							t	21.28	20.26	19.56
							Z	0.324	0.382	0.441
							pHS	3.914	4.023	4.127
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.635	3.153	2.863	2.638	2.422	2.241	2.206	2.093	2.012	1.963	1.936
19.00	18.59	16.48	16.34	16.21	16.12	18.11	18.06	18.03	16.18	16.17
0.509	0.588	0.653	0.710	0.775	0.839	0.853	0.900	0.937	0.964	0.978
4.244	4.382	4.498	4.611	4.758	4.938	4.983	5.173	5.390	5.650	5.865
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.918	1.907	1.896	1.893	1.890	1.888	1.896	1.896	1.895	1.893	1.895
16.16	16.16	21.53	21.53	21.52	21.52	16.13	16.13	16.14	16.15	16.15
0.987	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.100	6.344	6.634	6.879	7.128	7.377	7.590	7.839	8.089	8.339	8.590
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 3				
1.894	1.893	1.892	1.889	1.887	1.885					
16.18	16.22	16.29	20.01	20.27	20.76					
1.000	1.000	1.000	1.000	1.000	1.000					
8.840	9.091	9.341	9.624	9.877	10.131					

3 ADIPIC ACID					C6H10O4		pHL	3.00	3.25	3.50
-1	24.6	4.430			146.14		RE	9.612	7.981	6.740
-2	52.4	5.277					t	31.81	30.07	29.04
							Z	0.335	0.404	0.480
							pHS	4.042	4.147	4.248
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.657	4.689	4.086	3.601	3.124	2.698	2.587	2.307	2.086	1.918	1.840
28.45	28.28	25.15	25.48	26.02	26.77	30.54	31.29	32.03	29.61	29.95
0.574	0.695	0.807	0.919	1.062	1.234	1.286	1.446	1.602	1.764	1.840
4.359	4.489	4.599	4.705	4.839	5.002	5.055	5.223	5.419	5.692	5.882
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.783	1.745	1.708	1.696	1.687	1.680	1.703	1.701	1.698	1.696	1.699
30.22	30.39	40.01	40.06	40.07	40.06	30.61	30.62	30.62	30.63	30.66
1.900	1.941	1.968	1.982	1.990	1.994	1.996	1.998	1.999	1.999	2.000
6.102	6.338	6.625	6.863	7.108	7.356	7.577	7.826	8.076	8.325	8.576
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 1				
1.697	1.695	1.693	1.682	1.678	1.675					
30.69	30.75	30.85	37.38	37.77	38.49					
2.000	2.000	2.000	2.000	2.000	2.000					
8.826	9.076	9.327	9.603	9.854	10.107					

4 ALLYLACETIC ACID C5H8O2

	-1	33.9	4.674		100.12		pHL	3.00	3.25	3.50
							RE	10.017	8.409	7.202
							t	24.29	23.04	22.18
							Z	0.230	0.275	0.322
							pHS	4.130	4.232	4.328

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.150	5.208	4.527	4.100	3.673	3.288	3.176	2.930	2.736	2.595	2.530
21.51	21.01	18.32	18.17	18.03	17.93	20.44	20.39	20.35	18.01	18.00
0.378	0.448	0.521	0.576	0.645	0.723	0.749	0.814	0.873	0.928	0.952
4.434	4.558	4.681	4.777	4.902	5.058	5.116	5.281	5.477	5.745	5.936

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.483	2.451	2.423	2.413	2.407	2.402	2.418	2.416	2.414	2.412	2.415
17.99	17.99	24.82	24.82	24.81	24.81	17.95	17.96	17.96	17.97	17.99
0.971	0.983	0.991	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.157	6.394	6.702	6.942	7.188	7.437	7.635	7.884	8.134	8.384	8.636

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 1 , 3
2.413	2.411	2.408	2.402	2.398	2.394	
18.03	18.09	18.19	23.02	23.47	24.34	
1.000	1.000	1.000	1.000	1.000	1.000	
8.886	9.137	9.388	9.686	9.941	10.199	

5 o-AMINOBENZOIC ACID C7H7NO2

	1	31.6	2.108		137.10		pHL	3.00	3.25	3.50
	-1	-31.6	4.939				RE	13.704	11.444	9.740
							t	25.78	24.32	23.32
							Z	0.180	0.216	0.254
							pHS	4.282	4.374	4.462

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
8.245	6.895	5.799	5.208	4.602	4.038	3.835	3.472	3.169	2.909	2.808
22.54	21.95	19.01	18.84	18.70	18.58	21.27	21.22	21.18	18.67	18.66
0.301	0.362	0.435	0.485	0.551	0.631	0.665	0.736	0.809	0.890	0.923
4.559	4.674	4.802	4.888	5.000	5.141	5.206	5.353	5.533	5.810	5.980

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.727	2.672	2.623	2.606	2.595	2.588	2.607	2.603	2.601	2.598	2.601
18.65	18.65	26.00	25.99	25.99	25.98	18.61	18.61	18.62	18.63	18.65
0.951	0.970	0.985	0.991	0.995	0.997	0.998	0.999	0.999	1.000	1.000
6.188	6.417	6.730	6.965	7.209	7.457	7.652	7.900	8.149	8.399	8.651

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 1
2.599	2.596	2.593	2.585	2.581	2.576	
18.69	18.76	18.88	24.12	24.66	25.72	
1.000	1.000	1.000	1.000	1.000	1.000	
8.901	9.152	9.404	9.707	9.963	10.223	

6 p-AMINOBENZOIC ACID C7H7NO2

	1	31.6	2.413		137.10		pHL	3.00	3.25	3.50
	-1	-31.6	4.853				RE	12.621	10.570	9.018
							t	26.28	24.68	23.57
							Z	0.196	0.234	0.275
							pHS	4.259	4.346	4.432

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.653	6.422	5.459	4.915	4.361	3.849	3.678	3.349	3.081	2.865	2.775
22.70	22.05	19.07	18.88	18.72	18.59	21.28	21.22	21.18	18.67	18.66
0.325	0.389	0.463	0.515	0.583	0.663	0.694	0.764	0.833	0.904	0.934
4.528	4.643	4.767	4.856	4.972	5.117	5.179	5.333	5.518	5.791	5.969

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.706	2.659	2.617	2.603	2.593	2.587	2.606	2.603	2.600	2.598	2.601
18.65	18.65	26.00	25.99	25.99	25.98	18.61	18.61	18.62	18.63	18.65
0.959	0.975	0.988	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
6.181	6.414	6.727	6.963	7.209	7.457	7.651	7.900	8.149	8.399	8.651

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 1
2.599	2.596	2.593	2.585	2.581	2.576	
18.69	18.76	18.88	24.12	24.66	25.72	
1.000	1.000	1.000	1.000	1.000	1.000	
8.901	9.152	9.404	9.707	9.963	10.223	

7 ARSENIC ACID H3AsO4 141.94

-1	35.2	2.190	
-2	70.0	6.940	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	2.463	2.407	2.370
t	27.10	24.32	22.57
Z	0.936	0.959	0.974
pHS	3.318	3.513	3.713

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.344	2.326	2.336	2.324	2.312	2.297	2.293	2.272	2.238	2.186	2.104
21.43	20.74	18.38	18.03	17.85	17.81	20.28	20.38	20.62	18.92	19.64
0.985	0.992	0.993	0.998	1.003	1.009	1.010	1.020	1.036	1.069	1.114
3.930	4.162	4.171	4.396	4.634	4.879	4.905	5.152	5.400	5.690	5.928

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.993	1.857	1.619	1.527	1.440	1.367	1.321	1.291	1.270	1.257	1.251
20.64	21.86	30.76	31.62	32.45	33.13	26.77	27.04	27.24	27.36	27.44
1.182	1.277	1.479	1.577	1.682	1.779	1.866	1.914	1.948	1.970	1.983
6.162	6.392	6.768	6.935	7.127	7.340	7.598	7.811	8.044	8.287	8.537

8.75	9.00	9.25	9.50	9.75	10.00
1.246	1.243	1.241	1.234	1.232	1.231
27.50	27.56	27.64	32.36	32.58	32.97
1.990	1.994	1.997	1.998	1.999	1.999
8.784	9.032	9.282	9.541	9.792	10.042

(Ref.) : 3 , 4

8 ASPARTIC ACID C4H7NO4 133.10

1	31.6	1.990	
-1	-31.6	3.900	
-2	-51.8	10.002	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	5.614	4.865	4.305
t	26.69	24.86	23.61
Z	0.449	0.520	0.589
pHS	3.807	3.922	4.038

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.832	3.437	3.311	3.107	2.932	2.801	2.781	2.703	2.653	2.640	2.623
22.67	22.00	19.19	18.92	18.71	18.57	21.32	21.24	21.20	18.68	18.66
0.664	0.743	0.777	0.830	0.881	0.923	0.929	0.956	0.974	0.985	0.991
4.173	4.334	4.412	4.555	4.734	4.943	4.982	5.201	5.436	5.674	5.909

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.611	2.603	2.589	2.585	2.581	2.576	2.594	2.587	2.574	2.553	2.523
18.65	18.65	26.02	26.02	26.04	26.06	18.72	18.81	18.96	19.23	19.71
0.995	0.997	0.999	1.000	1.002	1.003	1.006	1.010	1.018	1.032	1.057
6.153	6.400	6.709	6.957	7.206	7.456	7.653	7.903	8.153	8.403	8.669

8.75	9.00	9.25	9.50	9.75	10.00
2.470	2.391	2.287	2.131	2.014	1.911
20.45	21.57	23.09	31.05	33.26	35.62
1.098	1.161	1.253	1.400	1.531	1.661
8.917	9.162	9.405	9.699	9.925	10.157

(Ref.) : 11 , 1

9 ASPIRIN C9H8O4 180.16

-1	26.7	3.485	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	4.917	4.415	4.042
t	30.70	28.20	26.51
Z	0.617	0.689	0.755
pHS	3.663	3.800	3.942

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.740	3.506	3.488	3.359	3.260	3.193	3.180	3.142	3.117	3.127	3.119
25.29	24.45	21.20	20.81	20.53	20.36	23.65	23.55	23.49	20.49	20.47
0.818	0.875	0.886	0.921	0.950	0.970	0.972	0.984	0.991	0.994	0.997
4.105	4.296	4.340	4.517	4.725	4.954	4.991	5.226	5.470	5.698	5.941

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.112	3.106	3.088	3.086	3.083	3.079	3.112	3.110	3.107	3.104	3.109
20.46	20.45	29.23	29.22	29.21	29.20	20.41	20.42	20.42	20.44	20.47
0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.189	6.438	6.755	7.005	7.254	7.504	7.688	7.937	8.187	8.438	8.690

8.75	9.00	9.25	9.50	9.75	10.00
3.106	3.102	3.098	3.084	3.078	3.069
20.53	20.62	20.80	27.20	28.05	29.79
1.000	1.000	1.000	1.000	1.000	1.000
8.941	9.192	9.444	9.762	10.020	10.287

(Ref.) : 11 , 3

10 AZELAIC ACID C9H1604 188.22

-1 22.0 4.550
-2 45.9 5.333

	3.00	3.25	3.50
RE	11.739	9.723	8.186
t	34.49	32.49	31.28
Z	0.307	0.373	0.444
pHS	4.110	4.213	4.311

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.845	5.647	4.905	4.307	3.719	3.195	3.048	2.705	2.434	2.233	2.138
30.56	30.31	26.70	27.00	27.52	28.26	32.55	33.33	34.13	31.30	31.69
0.534	0.651	0.761	0.871	1.014	1.189	1.245	1.410	1.575	1.745	1.827
4.420	4.546	4.652	4.754	4.883	5.041	5.096	5.260	5.452	5.720	5.908

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.067	2.020	1.973	1.958	1.947	1.939	1.971	1.968	1.964	1.961	1.965
31.98	32.18	43.29	43.33	43.35	43.34	32.44	32.44	32.45	32.46	32.50
1.892	1.936	1.966	1.980	1.989	1.994	1.996	1.998	1.999	1.999	2.000
6.127	6.362	6.657	6.896	7.141	7.389	7.602	7.850	8.100	8.349	8.601

8.75	9.00	9.25	9.50	9.75	10.00
1.963	1.960	1.956	1.941	1.936	1.931
32.54	32.61	32.74	40.34	40.86	41.85
2.000	2.000	2.000	2.000	2.000	2.000
8.851	9.101	9.352	9.636	9.888	10.142

(Ref.) : 10 , 1

11 BENZENESULFONIC ACID C6H603S 158.17

-1 38.7 -2.000

	3.00	3.25	3.50
RE	2.093	2.093	2.093
t	25.93	23.10	21.37
Z	1.000	1.000	1.000
pHS	3.239	3.453	3.669

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.092	2.092	2.100	2.100	2.099	2.097	2.096	2.094	2.093	2.101	2.101
20.29	19.64	17.51	17.16	16.95	16.83	19.05	18.99	18.95	16.90	16.89
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.896	4.134	4.137	4.369	4.611	4.857	4.878	5.126	5.375	5.609	5.858

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.100	2.098	2.093	2.092	2.091	2.090	2.102	2.101	2.100	2.098	2.101
16.89	16.88	22.83	22.83	22.83	22.82	16.85	16.85	16.86	16.87	16.88
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.107	6.357	6.651	6.901	7.151	7.401	7.607	7.857	8.107	8.357	8.608

8.75	9.00	9.25	9.50	9.75	10.00
2.099	2.098	2.096	2.092	2.090	2.087
16.91	16.95	17.04	21.19	21.52	22.14
1.000	1.000	1.000	1.000	1.000	1.000
8.859	9.109	9.360	9.650	9.903	10.159

(Ref.) : 2 , 12

12 BENZOIC ACID C7H602 122.12

-1 33.6 4.203

	3.00	3.25	3.50
RE	6.683	5.705	4.971
t	24.91	23.46	22.47
Z	0.352	0.413	0.476
pHS	3.913	4.025	4.134

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.339	3.791	3.525	3.255	3.004	2.801	2.762	2.637	2.551	2.509	2.480
21.72	21.16	18.49	18.29	18.12	18.00	20.56	20.50	20.46	18.09	18.08
0.547	0.628	0.681	0.739	0.803	0.863	0.875	0.917	0.949	0.971	0.982
4.256	4.400	4.500	4.622	4.778	4.967	5.012	5.212	5.435	5.683	5.905

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.460	2.448	2.432	2.428	2.425	2.422	2.440	2.438	2.436	2.434	2.437
18.07	18.07	24.97	24.96	24.96	24.95	18.03	18.04	18.04	18.06	18.07
0.990	0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.144	6.389	6.694	6.940	7.189	7.438	7.636	7.886	8.136	8.386	8.637

8.75	9.00	9.25	9.50	9.75	10.00
2.436	2.433	2.431	2.424	2.421	2.417
18.11	18.17	18.28	23.16	23.62	24.51
1.000	1.000	1.000	1.000	1.000	1.000
8.888	9.138	9.390	9.689	9.944	10.202

(Ref.) : 2 , 1

13 BENZYLASPARATIC ACID C11H13NO4

1	25.8	-3.000	223.23
-1	-25.8	4.855	

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	14.983	12.525	10.669	9.051	7.605	6.621	5.944	5.269	4.659	4.463
t	29.33	27.56	26.35	25.44	24.77	21.23	21.03	20.86	20.73	24.07
Z	0.203	0.243	0.287	0.339	0.406	0.471	0.527	0.597	0.678	0.708
pHS	4.243	4.344	4.439	4.544	4.666	4.779	4.874	4.996	5.147	5.209

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
4.070	3.758	3.531	3.423	3.342	3.288	3.233	3.217	3.206	3.198	3.231
24.01	23.98	20.89	20.87	20.86	20.86	29.96	29.95	29.94	29.93	20.82
0.778	0.845	0.909	0.939	0.962	0.978	0.989	0.994	0.996	0.998	0.999
5.369	5.560	5.822	6.007	6.224	6.459	6.782	7.021	7.267	7.515	7.698

7.75	8.00	8.25	8.50	8.75	9.00	9.25
3.227	3.224	3.219	3.225	3.221	3.217	3.212
20.83	20.84	20.85	20.89	20.95	21.05	21.24
0.999	1.000	1.000	1.000	1.000	1.000	1.000
7.946	8.196	8.446	8.699	8.950	9.201	9.453

9.50	9.75	10.00	(Ref.) : 10	
3.197	3.190	3.180		
27.92	28.85	30.80		
1.000	1.000	1.000		
9.774	10.033	10.301		

14 BROMIC ACID (S) HBrO3

-1	57.8	-2.000	128.91

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	1.381	1.381	1.381	1.380	1.380	1.382	1.382	1.382	1.381	1.381
t	20.82	18.65	17.38	16.62	16.19	14.80	14.55	14.41	14.34	15.80
Z	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
pHS	3.101	3.333	3.567	3.806	4.051	4.053	4.295	4.542	4.790	4.799

5.00	5.25	5.50	5.75	6.00	6.25	6.50
1.381	1.380	1.383	1.382	1.382	1.382	1.381
15.76	15.73	14.38	14.37	14.37	14.37	18.28
1.000	1.000	1.000	1.000	1.000	1.000	1.000
5.048	5.298	5.541	5.790	6.040	6.290	6.559

6.75	7.00	7.25	7.50	7.75	8.00	8.25
1.380	1.380	1.380	1.383	1.382	1.382	1.382
18.28	18.29	18.29	14.34	14.35	14.35	14.36
1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.809	7.059	7.309	7.540	7.790	8.040	8.290

8.50	8.75	9.00	9.25	9.50
1.382	1.382	1.382	1.381	1.380
14.36	14.38	14.40	14.44	17.11
1.000	1.000	1.000	1.000	1.000
8.540	8.791	9.041	9.291	9.556

9.75	10.00	(Ref.) : 1 , 12	
1.380	1.379		
17.25	17.51		
1.000	1.000		
9.807	10.059		

15 BROMOACETIC ACID (S) C2H3BrO2

-1	40.6	2.901	138.95

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	2.556	2.374	2.247	2.154	2.089	2.090	2.054	2.030	2.014	2.012
t	23.93	21.93	20.62	19.72	19.13	17.07	16.77	16.58	16.47	18.58
Z	0.773	0.834	0.882	0.922	0.951	0.954	0.971	0.983	0.990	0.990
pHS	3.398	3.565	3.738	3.933	4.150	4.176	4.384	4.613	4.854	4.876

5.00	5.25	5.50	5.75	6.00	6.25	6.50
2.003	1.997	2.002	2.000	1.998	1.996	1.991
18.52	18.49	16.54	16.53	16.52	16.52	22.18
0.995	0.997	0.998	0.999	0.999	1.000	1.000
5.119	5.366	5.603	5.850	6.099	6.348	6.639

6.75	7.00	7.25	7.50	7.75	8.00	8.25
1.990	1.989	1.988	1.999	1.998	1.997	1.996
22.18	22.17	22.17	16.49	16.49	16.50	16.51
1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.889	7.139	7.389	7.598	7.848	8.098	8.348

8.50	8.75	9.00	9.25	9.50
1.998	1.997	1.995	1.994	1.990
16.52	16.54	16.58	16.66	20.60
1.000	1.000	1.000	1.000	1.000
8.599	8.850	9.100	9.351	9.637

9.75	10.00	(Ref.) : 3 , 1	
1.988	1.986		
20.89	21.44		
1.000	1.000		
9.890	10.145		

16 m-BROMOBENZOIC ACID C7H5BrO2

-1	31.5	3.812	201.02				pHL	3.00	3.25	3.50
							RE	5.249	4.582	4.082
							t	26.63	24.82	23.59
							Z	0.483	0.555	0.625
							pHS	3.755	3.879	4.003

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.662	3.316	3.222	3.040	2.886	2.775	2.758	2.692	2.650	2.642	2.628
22.67	22.02	19.22	18.95	18.74	18.60	21.36	21.28	21.23	18.71	18.69
0.698	0.774	0.802	0.852	0.898	0.936	0.940	0.964	0.979	0.987	0.993
4.145	4.314	4.385	4.536	4.722	4.936	4.974	5.197	5.434	5.671	5.908

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.618	2.611	2.598	2.595	2.593	2.590	2.611	2.610	2.608	2.606	2.609
18.68	18.68	26.06	26.05	26.05	26.04	18.64	18.64	18.65	18.66	18.68
0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.153	6.401	6.709	6.957	7.206	7.456	7.650	7.899	8.149	8.399	8.651

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.607	2.605	2.602	2.593	2.589	2.584	
18.72	18.79	18.92	24.17	24.72	25.78	
1.000	1.000	1.000	1.000	1.000	1.000	
8.902	9.153	9.404	9.708	9.964	10.224	

17 o-BROMOBENZOIC ACID C7H5BrO2

-1	31.5	2.854	201.02				pHL	3.00	3.25	3.50
							RE	3.183	2.993	2.860
							t	28.37	25.76	24.03
							Z	0.810	0.862	0.904
							pHS	3.449	3.617	3.791

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.763	2.695	2.705	2.667	2.641	2.624	2.619	2.609	2.602	2.614	2.611
22.85	22.08	19.40	19.01	18.75	18.60	21.37	21.29	21.24	18.71	18.69
0.936	0.961	0.962	0.976	0.986	0.992	0.992	0.996	0.998	0.999	0.999
3.987	4.205	4.225	4.434	4.663	4.904	4.933	5.177	5.424	5.654	5.901

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.609	2.606	2.595	2.594	2.592	2.590	2.611	2.610	2.608	2.605	2.609
18.68	18.68	26.06	26.05	26.05	26.04	18.64	18.64	18.65	18.66	18.68
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.150	6.399	6.707	6.956	7.206	7.456	7.649	7.899	8.149	8.399	8.651

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.607	2.605	2.602	2.593	2.589	2.584	
18.72	18.79	18.92	24.17	24.72	25.78	
1.000	1.000	1.000	1.000	1.000	1.000	
8.902	9.153	9.404	9.708	9.964	10.224	

18 p-BROMOBENZOIC ACID C7H5BrO2

-1	31.5	3.971	201.02				pHL	3.00	3.25	3.50
							RE	5.890	5.093	4.493
							t	26.38	24.67	23.51
							Z	0.429	0.497	0.566
							pHS	3.821	3.939	4.057

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.985	3.555	3.406	3.184	2.990	2.843	2.819	2.731	2.673	2.655	2.635
22.63	22.00	19.18	18.93	18.74	18.60	21.35	21.28	21.23	18.71	18.69
0.640	0.720	0.757	0.812	0.866	0.912	0.919	0.949	0.970	0.982	0.990
4.190	4.349	4.431	4.571	4.745	4.950	4.991	5.206	5.439	5.679	5.911

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.622	2.614	2.599	2.596	2.593	2.590	2.611	2.610	2.608	2.606	2.609
18.68	18.68	26.06	26.05	26.05	26.04	18.64	18.64	18.65	18.66	18.68
0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.154	6.401	6.709	6.957	7.207	7.456	7.650	7.899	8.149	8.399	8.651

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.607	2.605	2.602	2.593	2.589	2.584	
18.72	18.79	18.92	24.17	24.72	25.78	
1.000	1.000	1.000	1.000	1.000	1.000	
8.902	9.153	9.404	9.708	9.964	10.224	

19 2-BROMOBUTYRIC ACID C4H7BrO2

	-1	32.3	2.987

167.00

pHL	3.00	3.25	3.50
RE	3.263	3.033	2.870
t	27.66	25.22	23.61
Z	0.768	0.828	0.876
pHS	3.474	3.635	3.803

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.747	2.661	2.667	2.618	2.585	2.563	2.558	2.545	2.537	2.547	2.544
22.48	21.75	19.12	18.75	18.51	18.36	21.06	20.98	20.93	18.46	18.45
0.917	0.947	0.950	0.968	0.981	0.989	0.990	0.994	0.997	0.998	0.999
3.992	4.206	4.231	4.435	4.661	4.900	4.929	5.171	5.418	5.649	5.896

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.541	2.538	2.528	2.527	2.525	2.522	2.543	2.541	2.540	2.537	2.541
18.44	18.44	25.62	25.62	25.61	25.61	18.40	18.40	18.41	18.42	18.44
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.144	6.394	6.700	6.949	7.199	7.449	7.644	7.894	8.144	8.394	8.646

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.539	2.537	2.534	2.526	2.523	2.518	
18.48	18.54	18.66	23.77	24.28	25.27	
1.000	1.000	1.000	1.000	1.000	1.000	
8.896	9.147	9.399	9.701	9.956	10.215	

20 4-BROMOBUTYRIC ACID C4H7BrO2

	-1	34.4	4.585

167.00

pHL	3.00	3.25	3.50
RE	9.113	7.670	6.586
t	24.13	22.87	22.01
Z	0.250	0.297	0.347
pHS	4.086	4.190	4.288

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.643	4.802	4.224	3.839	3.456	3.116	3.025	2.809	2.643	2.529	2.473
21.34	20.84	18.20	18.04	17.90	17.80	20.28	20.22	20.19	17.88	17.87
0.407	0.480	0.551	0.607	0.677	0.753	0.776	0.837	0.891	0.938	0.960
4.396	4.523	4.643	4.743	4.873	5.034	5.090	5.261	5.463	5.728	5.925

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.433	2.407	2.383	2.375	2.369	2.365	2.381	2.379	2.377	2.375	2.378
17.86	17.86	24.59	24.58	24.58	24.57	17.82	17.83	17.83	17.84	17.86
0.976	0.986	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000
6.150	6.389	6.695	6.937	7.184	7.433	7.632	7.881	8.131	8.381	8.632

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.376	2.374	2.372	2.365	2.362	2.358	
17.89	17.95	18.06	22.80	23.24	24.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.883	9.133	9.385	9.682	9.936	10.195	

21 o-BROMOPHENYLACETIC ACID C8H7BrO2

	-1	31.4	4.054

215.05

pHL	3.00	3.25	3.50
RE	6.292	5.416	4.757
t	26.31	24.65	23.51
Z	0.402	0.468	0.535
pHS	3.857	3.973	4.087

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.195	3.715	3.529	3.284	3.067	2.897	2.868	2.766	2.698	2.673	2.650
22.65	22.04	19.20	18.96	18.77	18.63	21.39	21.32	21.27	18.74	18.72
0.609	0.690	0.732	0.788	0.846	0.897	0.906	0.940	0.964	0.979	0.988
4.217	4.370	4.457	4.591	4.760	4.960	5.002	5.213	5.443	5.684	5.914

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.634	2.624	2.609	2.605	2.602	2.599	2.620	2.619	2.617	2.614	2.618
18.71	18.71	26.11	26.11	26.10	26.09	18.67	18.67	18.68	18.69	18.72
0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.156	6.402	6.711	6.959	7.208	7.457	7.650	7.900	8.150	8.400	8.652

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2
2.616	2.613	2.610	2.602	2.598	2.593	
18.75	18.82	18.95	24.23	24.78	25.85	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.153	9.405	9.709	9.965	10.225	

22 2-BROMOPROPIONIC ACID C3H5BrO2

-1	33.4	2.975	152.98				pHL	3.00	3.25	3.50
							RE	3.149	2.927	2.769
							t	27.05	24.69	23.12
							Z	0.768	0.828	0.877
							pHS	3.463	3.625	3.793

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.651	2.568	2.573	2.527	2.495	2.474	2.470	2.457	2.449	2.459	2.455
22.03	21.32	18.79	18.43	18.20	18.06	20.66	20.58	20.53	18.15	18.14
0.917	0.948	0.951	0.969	0.981	0.989	0.990	0.994	0.997	0.998	0.999
3.983	4.197	4.223	4.427	4.654	4.893	4.921	5.163	5.410	5.642	5.888

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.453	2.450	2.441	2.440	2.438	2.436	2.454	2.453	2.451	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.137	6.387	6.691	6.940	7.190	7.440	7.637	7.887	8.137	8.387	8.639

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.451	2.449	2.446	2.439	2.436	2.432	
18.16	18.22	18.33	23.25	23.72	24.62	
1.000	1.000	1.000	1.000	1.000	1.000	
8.889	9.140	9.391	9.691	9.945	10.204	

23 5-BROMOVALERIC ACID C5H9BrO2

-1	32.3	4.721	181.03				pHL	3.00	3.25	3.50
							RE	10.913	9.150	7.825
							t	25.06	23.74	22.83
							Z	0.222	0.265	0.311
							pHS	4.157	4.258	4.354

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.670	5.635	4.888	4.418	3.947	3.521	3.393	3.120	2.905	2.745	2.673
22.12	21.60	18.77	18.61	18.47	18.36	21.01	20.95	20.92	18.46	18.45
0.366	0.435	0.507	0.562	0.631	0.710	0.737	0.804	0.865	0.923	0.949
4.459	4.582	4.704	4.800	4.923	5.077	5.136	5.299	5.493	5.761	5.949

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.618	2.583	2.550	2.539	2.532	2.526	2.545	2.543	2.540	2.538	2.541
18.44	18.44	25.62	25.62	25.61	25.61	18.40	18.40	18.41	18.42	18.44
0.968	0.981	0.991	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.169	6.405	6.716	6.955	7.202	7.450	7.646	7.895	8.144	8.394	8.646

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.539	2.537	2.534	2.526	2.523	2.518	
18.48	18.54	18.66	23.77	24.28	25.27	
1.000	1.000	1.000	1.000	1.000	1.000	
8.896	9.147	9.399	9.701	9.956	10.215	

24 o-t-BUTYLBENZOIC ACID C11H14O2

-1	23.2	3.535	178.23				pHL	3.00	3.25	3.50
							RE	5.717	5.137	4.704
							t	34.09	31.20	29.25
							Z	0.614	0.685	0.751
							pHS	3.709	3.845	3.985

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.352	4.076	4.062	3.909	3.791	3.711	3.693	3.647	3.617	3.634	3.623
27.83	26.87	23.10	22.65	22.33	22.13	25.94	25.83	25.76	22.29	22.26
0.814	0.872	0.883	0.919	0.948	0.969	0.971	0.983	0.990	0.994	0.997
4.147	4.336	4.378	4.554	4.761	4.990	5.030	5.265	5.509	5.733	5.976

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.615	3.607	3.581	3.578	3.574	3.570	3.615	3.612	3.609	3.604	3.611
22.25	22.24	32.42	32.41	32.39	32.38	22.20	22.21	22.22	22.24	22.28
0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.224	6.473	6.799	7.048	7.298	7.547	7.723	7.973	8.223	8.473	8.727

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
3.607	3.602	3.596	3.575	3.565	3.551	
22.36	22.49	22.73	30.36	31.65	34.47	
1.000	1.000	1.000	1.000	1.000	1.000	
8.978	9.229	9.482	9.813	10.075	10.350	

25	p-t-BUTYLBENZOIC ACID			C11H1402			pHL	3.00	3.25	3.50
	-1	23.2	4.400	178.23			RE	10.773	9.164	7.940
							t	32.41	30.15	28.63
							Z	0.318	0.376	0.435
							pHS	4.049	4.158	4.264

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.882	5.958	5.554	5.080	4.640	4.278	4.193	3.969	3.813	3.746	3.691
27.50	26.69	22.80	22.51	22.27	22.10	25.88	25.80	25.74	22.28	22.26
0.505	0.586	0.636	0.697	0.766	0.834	0.849	0.899	0.937	0.963	0.977
4.383	4.524	4.613	4.732	4.884	5.067	5.120	5.317	5.537	5.775	5.995

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.654	3.630	3.592	3.584	3.577	3.572	3.616	3.613	3.609	3.605	3.611
22.25	22.24	32.42	32.40	32.39	32.38	22.20	22.21	22.22	22.24	22.28
0.987	0.992	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.232	6.477	6.804	7.050	7.298	7.548	7.723	7.973	8.223	8.473	8.727

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
3.607	3.602	3.596	3.575	3.565	3.551	
22.36	22.49	22.73	30.36	31.65	34.47	
1.000	1.000	1.000	1.000	1.000	1.000	
8.978	9.229	9.482	9.813	10.075	10.350	

26	BUTYRIC ACID (S)			C4H802			pHL	3.00	3.25	3.50
	-1	33.8	4.820	88.11			RE	11.526	9.640	8.224
							t	24.23	23.01	22.18
							Z	0.200	0.240	0.282
							pHS	4.200	4.299	4.392

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.987	5.874	4.999	4.507	4.007	3.546	3.394	3.097	2.856	2.659	2.578
21.53	21.03	18.33	18.18	18.06	17.95	20.47	20.42	20.38	18.04	18.03
0.333	0.397	0.471	0.524	0.592	0.671	0.702	0.771	0.838	0.908	0.937
4.495	4.614	4.743	4.833	4.950	5.097	5.159	5.313	5.499	5.775	5.953

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.516	2.474	2.438	2.425	2.417	2.411	2.427	2.424	2.422	2.420	2.422
18.02	18.02	24.87	24.86	24.86	24.85	17.98	17.98	17.99	18.00	18.02
0.960	0.976	0.988	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
6.166	6.399	6.708	6.945	7.190	7.438	7.637	7.885	8.135	8.384	8.636

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.421	2.418	2.416	2.409	2.406	2.402	
18.05	18.11	18.22	23.07	23.52	24.40	
1.000	1.000	1.000	1.000	1.000	1.000	
8.887	9.137	9.388	9.687	9.942	10.200	

27	CACODYLIC ACID (S)			C2H7As02			pHL	3.00	3.25	3.50
	-1	29.9	6.184	138.00			RE	53.330	43.793	36.666
							t	25.77	24.52	23.67
							Z	0.048	0.058	0.070
							pHS	4.877	4.967	5.049

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
30.417	24.720	18.467	16.251	13.887	11.544	10.054	8.598	7.202	4.876	4.509
23.00	22.48	19.41	19.30	19.19	19.10	21.87	21.84	21.81	19.21	19.21
0.084	0.104	0.141	0.160	0.188	0.226	0.261	0.306	0.367	0.552	0.598
5.137	5.236	5.382	5.447	5.530	5.631	5.712	5.807	5.924	6.246	6.327

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
4.097	3.701	3.170	3.042	2.932	2.851	2.832	2.801	2.781	2.767	2.765
19.20	19.20	26.95	26.95	26.96	26.96	19.16	19.17	19.17	19.19	19.21
0.661	0.734	0.859	0.896	0.931	0.957	0.973	0.984	0.991	0.995	0.997
6.442	6.591	6.934	7.085	7.278	7.498	7.704	7.929	8.169	8.414	8.666

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10
2.759	2.754	2.750	2.739	2.735	2.728	
19.25	19.33	19.47	25.06	25.68	26.92	
0.998	0.999	0.999	1.000	1.000	1.000	
8.915	9.165	9.417	9.725	9.981	10.243	

28 CAPRIC ACID C10H2002

-1	22.1	5.000	172.27	

pHL	3.00	3.25	3.50
RE	19.575	16.318	13.849
t	32.90	30.75	29.30
Z	0.181	0.218	0.258
pHS	4.330	4.430	4.524

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
11.694	9.766	8.486	7.568	6.655	5.826	5.540	5.004	4.571	4.246	4.095
28.21	27.43	23.30	23.07	22.87	22.73	26.65	26.59	26.56	22.95	22.94
0.307	0.370	0.431	0.485	0.554	0.636	0.669	0.744	0.817	0.891	0.925
4.627	4.747	4.855	4.948	5.067	5.214	5.278	5.433	5.618	5.878	6.056

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.978	3.900	3.817	3.793	3.777	3.766	3.813	3.808	3.803	3.797	3.804
22.93	22.92	33.63	33.62	33.61	33.60	22.89	22.90	22.91	22.93	22.98
0.953	0.972	0.987	0.992	0.996	0.997	0.998	0.999	0.999	1.000	1.000
6.269	6.501	6.833	7.071	7.316	7.564	7.738	7.987	8.236	8.486	8.740

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 12
3.800	3.794	3.787	3.762	3.752	3.735	
23.06	23.21	23.49	31.60	33.11	36.50	
1.000	1.000	1.000	1.000	1.000	1.000	
8.991	9.243	9.496	9.832	10.096	10.375	

29 CAPROIC ACID (S) C6H1202

-1	30.2	4.857	116.16	

pHL	3.00	3.25	3.50
RE	13.156	10.992	9.364
t	26.15	24.73	23.76
Z	0.197	0.236	0.278
pHS	4.228	4.327	4.421

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.945	6.670	5.711	5.136	4.555	4.023	3.845	3.503	3.224	3.003	2.909
23.02	22.46	19.43	19.27	19.12	19.01	21.84	21.79	21.75	19.12	19.11
0.328	0.393	0.464	0.517	0.585	0.665	0.696	0.767	0.835	0.905	0.935
4.524	4.644	4.767	4.858	4.976	5.123	5.186	5.341	5.527	5.798	5.977

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.837	2.788	2.743	2.729	2.719	2.712	2.734	2.731	2.728	2.725	2.729
19.10	19.10	26.81	26.80	26.80	26.79	19.06	19.06	19.07	19.09	19.11
0.959	0.976	0.988	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
6.191	6.424	6.738	6.976	7.221	7.469	7.661	7.910	8.159	8.409	8.661

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 3 , 1
2.726	2.723	2.720	2.710	2.706	2.700	
19.15	19.23	19.36	24.89	25.49	26.69	
1.000	1.000	1.000	1.000	1.000	1.000	
8.912	9.162	9.414	9.721	9.977	10.239	

30 CAPRYLIC ACID C8H1602

-1	27.4	4.894	144.21	

pHL	3.00	3.25	3.50
RE	14.801	12.356	10.515
t	28.02	26.40	25.30
Z	0.193	0.232	0.273
pHS	4.255	4.355	4.449

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
8.909	7.469	6.428	5.767	5.103	4.497	4.293	3.902	3.586	3.340	3.232
24.46	23.83	20.50	20.32	20.16	20.03	23.17	23.11	23.08	20.17	20.16
0.323	0.388	0.455	0.509	0.578	0.658	0.690	0.762	0.831	0.902	0.933
4.552	4.672	4.790	4.883	5.001	5.148	5.211	5.367	5.553	5.820	6.000

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.149	3.093	3.039	3.022	3.011	3.003	3.031	3.028	3.024	3.020	3.025
20.15	20.15	28.69	28.68	28.67	28.67	20.11	20.12	20.12	20.14	20.17
0.958	0.975	0.988	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
6.213	6.446	6.766	7.004	7.250	7.498	7.684	7.932	8.182	8.431	8.684

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 10 , 7
3.022	3.018	3.014	3.001	2.995	2.988	
20.22	20.31	20.48	26.68	27.47	29.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.935	9.186	9.438	9.753	10.011	10.276	

31 CARBONIC ACID H2CO3 62.03

-1	46.1	6.352					pHL	3.00	3.25	3.50
-2	71.8	10.329					RE	43,836	36,281	30,593
							t	19.64	19.01	18.56
							Z	0.038	0.045	0.054
							pHS	4.934	5.020	5.097

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
25,532	20,840	14,611	12,986	11,188	9,343	7,956	6,854	5,745	3,518	3,267
18.18	17.88	15.88	15.82	15.76	15.70	17.46	17.44	17.42	15.72	15.72
0.065	0.079	0.114	0.128	0.149	0.179	0.211	0.245	0.294	0.487	0.525
5.180	5.275	5.446	5.504	5.579	5.672	5.759	5.843	5.947	6.299	6.364

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.966	2.653	2.146	2.051	1.955	1.875	1.823	1.793	1.770	1.753	1.739
15.71	15.70	20.61	20.61	20.62	20.63	15.67	15.70	15.76	15.87	16.05
0.579	0.650	0.808	0.846	0.889	0.928	0.960	0.977	0.991	1.004	1.019
6.459	6.586	6.937	7.053	7.213	7.412	7.657	7.862	8.092	8.334	8.592

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 1 , 4
1.720	1.694	1.655	1.589	1.519	1.443	
16.37	16.90	17.75	22.86	24.69	26.87	
1.039	1.070	1.120	1.210	1.317	1.447	
8.839	9.088	9.338	9.625	9.861	10.097	

32 CHLORIC ACID (S) HClO3 84.46

-1	67.0	-2.700					pHL	3.00	3.25	3.50
							RE	1.186	1.186	1.186
							t	19.42	17.43	16.28
							Z	1.000	1.000	1.000
							pHS	3.052	3.293	3.534

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.186	1.185	1.186	1.186	1.186	1.186	1.186	1.186	1.186	1.187	1.186
15.63	15.25	14.06	13.85	13.73	13.66	14.92	14.88	14.86	13.70	13.69
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.778	4.026	4.027	4.272	4.521	4.770	4.775	5.024	5.274	5.520	5.770

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.186	1.186	1.186	1.186	1.185	1.185	1.186	1.186	1.186	1.186	1.186
13.69	13.69	17.05	17.05	17.05	17.05	13.67	13.67	13.67	13.68	13.68
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.020	6.270	6.530	6.780	7.030	7.280	7.520	7.770	8.020	8.270	8.520

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 1 , 4
1.186	1.186	1.186	1.186	1.185	1.185	
13.69	13.71	13.75	16.03	16.13	16.32	
1.000	1.000	1.000	1.000	1.000	1.000	
8.770	9.020	9.270	9.528	9.779	10.029	

33 2-CHLORO-3-OH-BUTYRIC ACID C4H7ClO3 138.55

-1	34.4	2.602					pHL	3.00	3.25	3.50
							RE	2.721	2.600	2.518
							t	27.09	24.49	22.81
							Z	0.866	0.907	0.938
							pHS	3.377	3.557	3.743

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.460	2.421	2.431	2.409	2.394	2.384	2.381	2.375	2.370	2.381	2.379
21.68	20.97	18.53	18.16	17.93	17.79	20.31	20.24	20.19	17.88	17.87
0.960	0.976	0.977	0.986	0.992	0.995	0.996	0.997	0.999	0.999	1.000
3.949	4.175	4.189	4.406	4.640	4.884	4.909	5.154	5.402	5.634	5.882

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.377	2.375	2.367	2.365	2.364	2.362	2.379	2.378	2.376	2.375	2.378
17.86	17.86	24.59	24.58	24.58	24.57	17.82	17.83	17.83	17.84	17.86
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.131	6.381	6.682	6.932	7.182	7.432	7.630	7.881	8.131	8.381	8.632

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.376	2.374	2.372	2.365	2.362	2.358	
17.89	17.95	18.06	22.80	23.24	24.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.883	9.133	9.385	9.682	9.936	10.195	

34 CHLOROACETIC ACID C2H3ClO2

-1										
43.7	2.865	94.50					pHL	3.00	3.25	3.50
							RE	2.356	2.189	2.073
							t	22.92	21.04	19.81
							Z	0.778	0.838	0.886
							pHS	3.373	3.542	3.717

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.989	1.931	1.932	1.900	1.878	1.864	1.863	1.855	1.849	1.853	1.851
18.96	18.42	16.51	16.23	16.06	15.95	17.91	17.85	17.82	16.02	16.01
0.924	0.953	0.956	0.972	0.983	0.990	0.991	0.995	0.997	0.998	0.999
3.914	4.133	4.159	4.369	4.599	4.841	4.860	5.104	5.351	5.589	5.836

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.850	1.848	1.845	1.844	1.843	1.842	1.850	1.850	1.849	1.848	1.850
16.00	16.00	21.24	21.24	21.24	21.24	15.97	15.97	15.98	15.99	15.99
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.085	6.335	6.621	6.871	7.121	7.371	7.585	7.835	8.085	8.335	8.586

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 1
1.849	1.848	1.846	1.844	1.842	1.840	
16.02	16.05	16.12	19.75	20.00	20.46	
1.000	1.000	1.000	1.000	1.000	1.000	
8.836	9.086	9.337	9.619	9.871	10.125	

35 m-CHLOROBENZOIC ACID C7H5ClO2

-1										
32.0	3.830	156.57					pHL	3.00	3.25	3.50
							RE	5.244	4.571	4.066
							t	26.31	24.55	23.34
							Z	0.475	0.547	0.617
							pHS	3.760	3.883	4.007

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.642	3.290	3.191	3.006	2.851	2.737	2.720	2.652	2.609	2.600	2.585
22.45	21.81	19.06	18.79	18.59	18.45	21.16	21.09	21.04	18.55	18.54
0.691	0.767	0.796	0.847	0.895	0.933	0.938	0.962	0.978	0.987	0.992
4.147	4.314	4.388	4.537	4.722	4.935	4.972	5.194	5.431	5.668	5.905

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.575	2.568	2.555	2.553	2.550	2.548	2.568	2.567	2.565	2.563	2.566
18.53	18.52	25.78	25.78	25.77	25.77	18.49	18.49	18.50	18.51	18.53
0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.149	6.397	6.704	6.953	7.202	7.452	7.646	7.896	8.146	8.396	8.648

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.564	2.562	2.559	2.551	2.547	2.542	
18.57	18.64	18.76	23.92	24.44	25.46	
1.000	1.000	1.000	1.000	1.000	1.000	
8.898	9.149	9.401	9.704	9.959	10.219	

36 o-CHLOROBENZOIC ACID C7H5ClO2

-1										
33.8	2.943	156.57					pHL	3.00	3.25	3.50
							RE	3.077	2.866	2.717
							t	26.89	24.53	22.96
							Z	0.777	0.836	0.883
							pHS	3.452	3.615	3.785

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.606	2.528	2.534	2.491	2.461	2.441	2.437	2.426	2.418	2.428	2.425
21.88	21.17	18.67	18.32	18.09	17.95	20.52	20.44	20.39	18.04	18.03
0.922	0.951	0.954	0.971	0.982	0.990	0.990	0.994	0.997	0.998	0.999
3.977	4.193	4.217	4.423	4.650	4.890	4.917	5.160	5.407	5.639	5.886

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.422	2.419	2.411	2.409	2.408	2.406	2.424	2.422	2.421	2.419	2.422
18.02	18.02	24.87	24.87	24.86	24.86	17.98	17.98	17.99	18.00	18.02
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.135	6.384	6.688	6.937	7.187	7.437	7.634	7.884	8.134	8.384	8.636

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.420	2.418	2.416	2.409	2.406	2.402	
18.05	18.11	18.22	23.07	23.52	24.40	
1.000	1.000	1.000	1.000	1.000	1.000	
8.886	9.137	9.388	9.687	9.942	10.200	

37 p-CHLOROBENZOIC ACID C7H5ClO2

	-1	33.4	3.977	156.57

pHL	3.00	3.25	3.50
RE	5.625	4.857	4.280
t	25.32	23.74	22.66
Z	0.423	0.491	0.559
pHS	3.815	3.934	4.050

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.791	3.375	3.223	3.011	2.824	2.682	2.659	2.574	2.517	2.498	2.478
21.84	21.26	18.60	18.37	18.18	18.06	20.64	20.57	20.53	18.15	18.14
0.633	0.713	0.752	0.807	0.862	0.909	0.916	0.947	0.968	0.982	0.989
4.183	4.340	4.426	4.563	4.736	4.940	4.980	5.194	5.426	5.667	5.899

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.466	2.457	2.445	2.442	2.439	2.437	2.455	2.453	2.452	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13
0.994	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.142	6.389	6.693	6.941	7.190	7.440	7.637	7.887	8.137	8.387	8.639

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.451	2.449	2.446	2.439	2.436	2.432	
18.16	18.22	18.33	23.25	23.72	24.62	
1.000	1.000	1.000	1.000	1.000	1.000	
8.889	9.140	9.391	9.691	9.945	10.204	

38 2-CHLOROBUTYRIC ACID C4H7ClO2

	-1	34.4	2.839	122.55

pHL	3.00	3.25	3.50
RE	2.916	2.738	2.613
t	26.74	24.33	22.75
Z	0.806	0.860	0.902
pHS	3.423	3.592	3.767

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.522	2.459	2.467	2.431	2.407	2.392	2.388	2.379	2.373	2.382	2.380
21.66	20.96	18.52	18.16	17.93	17.79	20.31	20.24	20.19	17.88	17.87
0.936	0.960	0.962	0.976	0.986	0.992	0.992	0.996	0.998	0.999	0.999
3.964	4.183	4.205	4.414	4.644	4.886	4.912	5.155	5.403	5.635	5.882

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.377	2.375	2.367	2.365	2.364	2.362	2.379	2.378	2.376	2.375	2.378
17.86	17.86	24.59	24.58	24.58	24.57	17.82	17.83	17.83	17.84	17.86
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.131	6.381	6.682	6.932	7.182	7.432	7.631	7.881	8.131	8.381	8.632

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.376	2.374	2.372	2.365	2.362	2.358	
17.89	17.95	18.06	22.80	23.24	24.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.883	9.133	9.385	9.682	9.936	10.195	

39 3-CHLOROBUTYRIC ACID C4H7ClO2

	-1	34.4	4.056	122.55

pHL	3.00	3.25	3.50
RE	5.824	5.006	4.391
t	24.70	23.23	22.22
Z	0.395	0.461	0.527
pHS	3.846	3.961	4.075

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.867	3.418	3.230	3.005	2.802	2.643	2.617	2.521	2.456	2.430	2.408
21.45	20.89	18.30	18.09	17.92	17.79	20.30	20.23	20.19	17.88	17.87
0.601	0.682	0.727	0.783	0.842	0.894	0.902	0.937	0.962	0.978	0.987
4.203	4.355	4.447	4.579	4.745	4.943	4.984	5.193	5.422	5.667	5.895

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.394	2.384	2.371	2.368	2.365	2.363	2.380	2.378	2.377	2.375	2.378
17.86	17.86	24.59	24.58	24.58	24.57	17.82	17.83	17.83	17.84	17.86
0.992	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.137	6.383	6.686	6.934	7.182	7.432	7.631	7.881	8.131	8.381	8.632

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.376	2.374	2.372	2.365	2.362	2.358	
17.89	17.95	18.06	22.80	23.24	24.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.883	9.133	9.385	9.682	9.936	10.195	

40 2-CHLOROCROTONIC ACID C4H5ClO2

	-1	35.4	3.155	120.54			pHL	3.00	3.25	3.50
							RE	3.225	2.947	2.746
							t	25.70	23.63	22.24
							Z	0.704	0.773	0.831
							pHS	3.499	3.652	3.811

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.592	2.479	2.476	2.414	2.369	2.340	2.336	2.319	2.308	2.315	2.311
21.27	20.61	18.21	17.89	17.68	17.55	19.99	19.92	19.88	17.63	17.62
0.882	0.923	0.929	0.953	0.971	0.983	0.984	0.991	0.995	0.997	0.998
3.991	4.197	4.232	4.427	4.648	4.885	4.911	5.152	5.398	5.631	5.877

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.308	2.305	2.297	2.296	2.294	2.293	2.308	2.307	2.306	2.304	2.307
17.61	17.61	24.14	24.14	24.13	24.13	17.57	17.58	17.58	17.59	17.61
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.126	6.375	6.675	6.925	7.174	7.424	7.625	7.875	8.125	8.375	8.626

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.305	2.304	2.301	2.296	2.293	2.289	
17.64	17.70	17.79	22.39	22.80	23.57	
1.000	1.000	1.000	1.000	1.000	1.000	
8.877	9.127	9.379	9.674	9.928	10.186	

41 3-CHLOROCROTONIC ACID C4H5ClO2

	-1	35.4	3.848	120.54			pHL	3.00	3.25	3.50
							RE	4.865	4.227	3.750
							t	24.52	22.98	21.93
							Z	0.461	0.532	0.602
							pHS	3.753	3.875	3.997

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.348	3.013	2.905	2.732	2.585	2.475	2.459	2.394	2.352	2.340	2.326
21.14	20.57	18.08	17.85	17.67	17.55	19.98	19.92	19.87	17.63	17.62
0.676	0.754	0.787	0.838	0.887	0.928	0.933	0.958	0.975	0.986	0.992
4.135	4.300	4.380	4.525	4.707	4.917	4.953	5.173	5.408	5.649	5.884

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.316	2.310	2.300	2.297	2.295	2.293	2.309	2.307	2.306	2.304	2.307
17.61	17.61	24.14	24.14	24.13	24.13	17.57	17.58	17.58	17.59	17.61
0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.129	6.376	6.677	6.925	7.175	7.424	7.625	7.875	8.125	8.375	8.626

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.305	2.304	2.301	2.296	2.293	2.289	
17.64	17.70	17.79	22.39	22.80	23.57	
1.000	1.000	1.000	1.000	1.000	1.000	
8.877	9.127	9.379	9.674	9.928	10.186	

42 CHLORODIBROMOACETIC ACID C2HBr2ClO2

	-1	36.5	1.000	252.29			pHL	3.00	3.25	3.50
							RE	2.235	2.231	2.228
							t	26.84	23.91	22.11
							Z	0.995	0.997	0.998
							pHS	3.264	3.474	3.686

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.226	2.225	2.234	2.233	2.232	2.230	2.228	2.227	2.225	2.235	2.234
20.97	20.28	18.02	17.64	17.42	17.29	19.66	19.59	19.55	17.37	17.36
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.911	4.148	4.152	4.382	4.623	4.869	4.892	5.139	5.388	5.620	5.869

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.233	2.231	2.224	2.224	2.222	2.221	2.235	2.234	2.233	2.231	2.234
17.35	17.35	23.68	23.67	23.67	23.66	17.32	17.32	17.33	17.34	17.35
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.119	6.368	6.666	6.916	7.166	7.416	7.619	7.869	8.119	8.369	8.620

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 12
2.233	2.231	2.229	2.223	2.221	2.218	
17.38	17.43	17.52	21.96	22.34	23.06	
1.000	1.000	1.000	1.000	1.000	1.000	
8.870	9.121	9.372	9.665	9.919	10.176	

43 CHLORODIFLUOROACETIC ACID C2HClF2O2

	-1	38.6	1.000	130.48			pHL	3.00	3.25	3.50
							RE	2.109	2.105	2.102
							t	25.94	23.13	21.40
							Z	0.995	0.997	0.998
							pHS	3.244	3.456	3.671
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.100	2.099	2.107	2.106	2.105	2.103	2.102	2.100	2.099	2.107	2.106
20.32	19.67	17.53	17.18	16.97	16.85	19.08	19.01	18.97	16.92	16.91
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.897	4.135	4.139	4.370	4.611	4.858	4.879	5.127	5.376	5.609	5.858
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.105	2.104	2.098	2.098	2.097	2.095	2.107	2.107	2.106	2.104	2.106
16.91	16.90	22.87	22.86	22.86	22.86	16.87	16.87	16.88	16.89	16.90
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.108	6.358	6.652	6.902	7.152	7.401	7.608	7.858	8.108	8.358	8.609
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 3 , 12				
2.105	2.104	2.102	2.098	2.095	2.093					
16.93	16.97	17.06	21.22	21.56	22.18					
1.000	1.000	1.000	1.000	1.000	1.000					
8.859	9.110	9.361	9.650	9.903	10.159					

44 2-CHLOROISOCROTONIC ACID C4H5ClO2

	-1	35.4	2.810	120.54			pHL	3.00	3.25	3.50
							RE	2.812	2.643	2.526
							t	26.28	23.92	22.36
							Z	0.811	0.865	0.906
							pHS	3.409	3.580	3.757
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.441	2.382	2.390	2.357	2.334	2.320	2.317	2.308	2.302	2.311	2.309
21.30	20.62	18.25	17.90	17.68	17.55	19.99	19.92	19.88	17.63	17.62
0.938	0.962	0.964	0.977	0.987	0.992	0.993	0.996	0.998	0.999	0.999
3.955	4.175	4.196	4.407	4.638	4.879	4.904	5.149	5.396	5.629	5.876
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.307	2.304	2.297	2.296	2.294	2.292	2.308	2.307	2.306	2.304	2.307
17.61	17.61	24.14	24.14	24.13	24.13	17.57	17.58	17.58	17.59	17.61
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.125	6.375	6.675	6.924	7.174	7.424	7.625	7.875	8.125	8.375	8.626
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3				
2.305	2.304	2.301	2.296	2.293	2.289					
17.64	17.70	17.79	22.39	22.80	23.57					
1.000	1.000	1.000	1.000	1.000	1.000					
8.877	9.127	9.379	9.674	9.928	10.186					

45 m-CHLOROPHENOL C6H5ClO

	-1	33.4	9.023	128.56			pHL	3.00	3.25	3.50
							RE			
							t	23.86	22.87	22.17
							Z	0.002	0.002	0.003
							pHS	6.286	6.373	6.451
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
									61.200	55.694
21.62	21.18	18.44	18.35	18.27	18.20	20.61	20.58	20.56	18.30	18.30
0.003	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.017	0.037	0.041
6.534	6.626	6.786	6.843	6.914	7.001	7.089	7.164	7.255	7.602	7.644
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
48.789	41.096	18.793	17.288	15.352	13.145	7.802	7.185	6.417	5.579	4.249
18.29	18.29	24.92	24.93	24.94	24.95	18.27	18.27	18.28	18.29	18.33
0.047	0.056	0.123	0.134	0.151	0.176	0.302	0.328	0.369	0.425	0.564
7.704	7.782	8.155	8.197	8.257	8.337	8.637	8.689	8.765	8.866	9.106
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) 3 , 1				
3.850	3.456	3.119	2.800	2.659	2.562					
18.37	18.43	18.54	23.51	23.98	24.91					
0.625	0.698	0.776	0.866	0.912	0.947					
9.213	9.354	9.527	9.798	10.005	10.237					

46 o-CHLOROPHENOL C6H5ClO

-1	33.4	8.477	128.56

pHL	3.00	3.25	3.50
RE			
t	23.80	22.80	22.10
Z	0.003	0.004	0.005
pHS	6.013	6.099	6.177

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
							88.132	71.708	33.661	30.647
21.54	21.11	18.37	18.28	18.20	18.13	20.53	20.51	20.48	18.22	18.22
0.006	0.008	0.011	0.012	0.015	0.018	0.022	0.026	0.032	0.068	0.075
6.260	6.353	6.513	6.569	6.641	6.729	6.816	6.892	6.984	7.330	7.374

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
26.879	22.697	11.020	10.152	9.048	7.807	5.171	4.789	4.330	3.852	3.255
18.21	18.21	24.87	24.88	24.89	24.90	18.17	18.17	18.17	18.18	18.20
0.085	0.101	0.211	0.230	0.258	0.300	0.461	0.499	0.553	0.624	0.744
7.435	7.516	7.887	7.933	7.999	8.088	8.382	8.447	8.540	8.666	8.907

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
3.026	2.826	2.678	2.559	2.506	2.471	
18.23	18.29	18.40	23.33	23.80	24.70	
0.803	0.861	0.910	0.951	0.971	0.983	
9.051	9.232	9.443	9.729	9.964	10.214	

47 p-CHLOROPHENOL C6H5ClO

-1	33.4	9.378	128.60

pHL	3.00	3.25	3.50
RE			
t	23.98	23.00	22.31
Z	0.001	0.001	0.002
pHS	6.465	6.552	6.630

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
									90.705	82.548
21.76	21.32	18.56	18.48	18.40	18.33	20.74	20.72	20.70	18.43	18.43
0.002	0.003	0.004	0.004	0.005	0.006	0.008	0.009	0.011	0.025	0.028
6.712	6.805	6.965	7.022	7.093	7.179	7.267	7.342	7.432	7.781	7.822

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
72.299	60.855	27.121	24.943	22.127	18.897	10.628	9.768	8.685	7.481	5.343
18.43	18.42	25.07	25.07	25.08	25.10	18.42	18.43	18.44	18.45	18.52
0.031	0.037	0.085	0.092	0.104	0.122	0.220	0.240	0.270	0.315	0.445
7.881	7.959	8.332	8.372	8.430	8.507	8.809	8.857	8.925	9.017	9.256

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
4.788	4.211	3.687	3.120	2.884	2.705	
18.56	18.63	18.75	23.80	24.30	25.26	
0.498	0.569	0.652	0.773	0.838	0.894	
9.347	9.468	9.618	9.878	10.059	10.271	

48 p-CHLOROPHENYLACETIC ACID C8H7ClO2

-1	34.5	4.190	170.60

pHL	3.00	3.25	3.50
RE	6.462	5.519	4.810
t	24.48	23.08	22.12
Z	0.354	0.416	0.478
pHS	3.905	4.017	4.125

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.202	3.673	3.414	3.155	2.914	2.718	2.682	2.562	2.479	2.439	2.411
21.38	20.84	18.24	18.05	17.89	17.77	20.26	20.20	20.16	17.86	17.84
0.550	0.631	0.684	0.742	0.805	0.865	0.876	0.919	0.950	0.971	0.982
4.247	4.392	4.493	4.615	4.771	4.960	5.005	5.205	5.429	5.677	5.900

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.392	2.380	2.366	2.362	2.359	2.356	2.372	2.371	2.370	2.367	2.370
17.84	17.83	24.54	24.54	24.53	24.53	17.80	17.80	17.81	17.82	17.83
0.990	0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.138	6.384	6.687	6.933	7.182	7.431	7.630	7.880	8.130	8.380	8.632

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2
2.369	2.367	2.364	2.358	2.355	2.351	
17.87	17.93	18.03	22.76	23.20	24.02	
1.000	1.000	1.000	1.000	1.000	1.000	
8.882	9.133	9.384	9.681	9.936	10.194	

49 2-CHLOROPROPIONIC ACID C3H5ClO2

-1	36.9	2.796	108.52				pHL	3.00	3.25	3.50
							RE	2.692	2.530	2.418
							t	25.60	23.32	21.82
							Z	0.812	0.865	0.906
							pHS	3.396	3.567	3.746

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.337	2.281	2.287	2.256	2.234	2.221	2.218	2.210	2.204	2.212	2.210
20.80	20.15	17.88	17.54	17.33	17.20	19.54	19.47	19.43	17.28	17.27
0.939	0.962	0.964	0.978	0.987	0.992	0.993	0.996	0.998	0.999	0.999
3.945	4.165	4.186	4.398	4.629	4.871	4.895	5.139	5.387	5.620	5.868

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.208	2.206	2.200	2.199	2.197	2.195	2.210	2.209	2.208	2.206	2.208
17.26	17.26	23.52	23.51	23.51	23.50	17.23	17.23	17.24	17.25	17.26
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.117	6.366	6.664	6.913	7.163	7.413	7.616	7.866	8.116	8.366	8.618

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3				
2.207	2.205	2.203	2.198	2.196	2.193					
17.29	17.34	17.43	21.82	22.18	22.88					
1.000	1.000	1.000	1.000	1.000	1.000					
8.868	9.119	9.370	9.662	9.916	10.173					

50 3-CHLOROPROPIONIC ACID C3H5ClO2

-1	36.9	3.867	108.52				pHL	3.00	3.25	3.50
							RE	4.756	4.125	3.653
							t	23.82	22.38	21.39
							Z	0.452	0.522	0.592
							pHS	3.756	3.877	3.997

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.255	2.922	2.806	2.636	2.489	2.379	2.364	2.299	2.256	2.242	2.227
20.64	20.10	17.71	17.49	17.32	17.20	19.53	19.47	19.43	17.28	17.27
0.666	0.744	0.780	0.831	0.882	0.924	0.929	0.956	0.974	0.985	0.991
4.134	4.297	4.380	4.524	4.703	4.911	4.947	5.165	5.400	5.643	5.877

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.218	2.212	2.202	2.200	2.198	2.196	2.210	2.209	2.208	2.206	2.208
17.27	17.26	23.51	23.51	23.51	23.50	17.23	17.23	17.24	17.25	17.26
0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.121	6.368	6.666	6.914	7.164	7.413	7.617	7.866	8.116	8.367	8.618

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3				
2.207	2.205	2.203	2.198	2.196	2.193					
17.29	17.34	17.43	21.82	22.18	22.88					
1.000	1.000	1.000	1.000	1.000	1.000					
8.868	9.119	9.370	9.662	9.916	10.173					

51 CHLOROUS ACID HClO2

-1	53.9	1.960	68.46				pHL	3.00	3.25	3.50
							RE	1.566	1.534	1.514
							t	21.27	19.19	17.93
							Z	0.946	0.967	0.980
							pHS	3.166	3.380	3.598

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.501	1.493	1.496	1.492	1.489	1.487	1.487	1.485	1.484	1.487	1.487
17.15	16.69	15.18	14.93	14.78	14.69	16.27	16.22	16.20	14.74	14.74
0.988	0.993	0.993	0.996	0.998	0.999	0.999	0.999	1.000	1.000	1.000
3.828	4.068	4.075	4.310	4.554	4.801	4.812	5.061	5.310	5.552	5.801

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.486	1.485	1.484	1.484	1.483	1.483	1.487	1.486	1.486	1.486	1.486
14.73	14.73	18.94	18.94	18.94	18.94	14.71	14.71	14.71	14.72	14.72
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.051	6.300	6.573	6.823	7.073	7.323	7.550	7.800	8.050	8.300	8.551

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 2 , 4				
1.486	1.485	1.485	1.484	1.483	1.482					
14.74	14.77	14.81	17.70	17.86	18.15					
1.000	1.000	1.000	1.000	1.000	1.000					
8.801	9.051	9.302	9.571	9.822	10.074					

52 5-CHLOROVALERIC ACID C5H9ClO2

-1	32.3	4.697	136.58

	3.00	3.25	3.50
pHL			
RE	10.670	8.952	7.661
t	25.08	23.75	22.84
Z	0.227	0.271	0.318
pHS	4.145	4.247	4.343

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.536	5.529	4.812	4.354	3.894	3.481	3.359	3.095	2.887	2.736	2.666
22.13	21.60	18.78	18.62	18.47	18.36	21.01	20.95	20.92	18.46	18.45
0.374	0.444	0.515	0.571	0.640	0.718	0.745	0.811	0.871	0.926	0.951
4.449	4.573	4.694	4.791	4.915	5.071	5.130	5.294	5.490	5.756	5.947

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.615	2.581	2.549	2.539	2.532	2.526	2.545	2.543	2.540	2.538	2.541
18.44	18.44	25.62	25.62	25.61	25.61	18.40	18.40	18.41	18.42	18.44
0.970	0.982	0.991	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.168	6.405	6.715	6.955	7.202	7.450	7.646	7.895	8.144	8.394	8.646

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.539	2.537	2.534	2.526	2.523	2.518	
18.48	18.54	18.66	23.77	24.28	25.27	
1.000	1.000	1.000	1.000	1.000	1.000	
8.896	9.147	9.399	9.701	9.956	10.215	

53 CHROMIC ACID H2CrO4

-1	59.3	0.745	118.01
-2	81.1	6.490	

	3.00	3.25	3.50
pHL			
RE	1.350	1.347	1.346
t	20.55	18.43	17.20
Z	0.997	0.999	1.000
pHS	3.095	3.328	3.562

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.344	1.343	1.345	1.343	1.340	1.336	1.335	1.327	1.315	1.294	1.266
16.49	16.10	14.74	14.55	14.52	14.62	16.08	16.36	16.88	16.45	17.62
1.002	1.004	1.004	1.008	1.015	1.026	1.027	1.047	1.080	1.146	1.230
3.802	4.047	4.050	4.293	4.540	4.789	4.800	5.049	5.299	5.587	5.825

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.230	1.190	1.140	1.114	1.092	1.076	1.074	1.068	1.065	1.062	1.062
19.10	20.75	28.02	29.31	30.35	31.08	25.71	25.95	26.10	26.19	26.24
1.342	1.475	1.647	1.748	1.835	1.898	1.940	1.965	1.980	1.988	1.993
6.062	6.299	6.601	6.809	7.037	7.275	7.527	7.768	8.015	8.263	8.513

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 10 , 2
1.061	1.060	1.060	1.055	1.055	1.054	
26.29	26.33	26.40	30.41	30.58	30.88	
1.996	1.998	1.999	1.999	2.000	2.000	
8.763	9.013	9.262	9.515	9.765	10.015	

54 CINNAMIC ACID C9H8O2

-1	28.3	4.438	148.16

	3.00	3.25	3.50
pHL			
RE	9.443	7.998	6.906
t	27.82	26.11	24.95
Z	0.296	0.350	0.407
pHS	4.040	4.147	4.250

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.962	5.130	4.685	4.278	3.890	3.562	3.484	3.279	3.131	3.052	3.001
24.07	23.43	20.23	20.01	19.83	19.69	22.75	22.68	22.64	19.82	19.80
0.473	0.552	0.611	0.671	0.740	0.811	0.828	0.882	0.924	0.956	0.973
4.366	4.501	4.604	4.716	4.860	5.036	5.088	5.276	5.491	5.739	5.952

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.966	2.943	2.916	2.909	2.903	2.899	2.926	2.924	2.921	2.918	2.923
19.79	19.79	28.04	28.04	28.03	28.02	19.75	19.75	19.76	19.78	19.80
0.984	0.991	0.995	0.997	0.999	0.999	0.999	1.000	1.000	1.000	1.000
6.186	6.429	6.745	6.990	7.238	7.487	7.674	7.924	8.174	8.424	8.676

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
2.920	2.917	2.913	2.901	2.896	2.889	
19.85	19.94	20.09	26.06	26.78	28.24	
1.000	1.000	1.000	1.000	1.000	1.000	
8.927	9.178	9.430	9.742	10.000	10.263	

55 cis-CINNAMIC ACID C9H8O2

-1	28.3	3.879	148.16

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	6.035	5.258	4.673
t	28.66	26.63	25.26
Z	0.469	0.540	0.609
pHS	3.799	3.921	4.043

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.181	3.771	3.662	3.444	3.261	3.125	3.103	3.023	2.972	2.963	2.945
24.23	23.51	20.38	20.08	19.85	19.70	22.78	22.70	22.65	19.82	19.80
0.683	0.760	0.789	0.841	0.890	0.930	0.935	0.960	0.977	0.986	0.992
4.183	4.349	4.419	4.568	4.751	4.963	5.004	5.226	5.462	5.696	5.932

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.933	2.925	2.907	2.904	2.900	2.897	2.925	2.923	2.921	2.918	2.923
19.79	19.79	28.05	28.04	28.03	28.02	19.75	19.75	19.76	19.78	19.80
0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.177	6.425	6.739	6.988	7.237	7.487	7.674	7.924	8.174	8.424	8.676

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
2.920	2.917	2.913	2.901	2.896	2.889	
19.85	19.94	20.09	26.06	26.78	28.24	
1.000	1.000	1.000	1.000	1.000	1.000	
8.927	9.178	9.430	9.742	10.000	10.263	

56 CITRACONIC ACID C5H6O4

-1	28.0	2.458	130.10
-2	56.0	6.146	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	3.215	3.113	3.041
t	31.42	28.21	26.16
Z	0.910	0.941	0.964
pHS	3.419	3.602	3.790

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.985	2.938	2.954	2.910	2.852	2.770	2.750	2.631	2.474	2.234	2.087
24.82	24.05	21.03	20.76	20.80	21.16	24.40	25.14	26.20	25.14	26.17
0.983	1.000	1.001	1.017	1.038	1.071	1.077	1.130	1.208	1.362	1.467
3.997	4.224	4.240	4.458	4.692	4.934	4.974	5.212	5.447	5.772	5.956

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.946	1.825	1.700	1.651	1.615	1.591	1.599	1.591	1.585	1.581	1.582
27.17	28.03	37.63	37.99	38.24	38.39	29.67	29.73	29.77	29.80	29.83
1.584	1.699	1.826	1.884	1.928	1.957	1.975	1.985	1.992	1.995	1.997
6.156	6.370	6.680	6.883	7.110	7.349	7.577	7.819	8.066	8.315	8.566

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 12 , 2
1.580	1.577	1.575	1.566	1.563	1.560	
29.86	29.92	30.01	36.07	36.40	37.03	
1.998	1.999	2.000	2.000	2.000	2.000	
8.815	9.065	9.315	9.587	9.838	10.091	

57 CITRIC ACID (S) C6H8O7

-1	28.7	3.128	192.13
-2	54.7	4.761	
-3	74.4	6.396	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	3.601	3.244	2.958
t	31.06	28.91	27.81
Z	0.796	0.889	0.984
pHS	3.529	3.683	3.842

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.698	2.454	2.396	2.212	2.037	1.883	1.859	1.744	1.649	1.573	1.511
27.49	27.90	25.15	26.00	27.08	28.28	31.80	33.01	34.33	32.98	34.50
1.090	1.215	1.260	1.384	1.527	1.679	1.701	1.843	1.984	2.156	2.296
4.021	4.220	4.286	4.465	4.664	4.878	4.912	5.126	5.354	5.632	5.849

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.452	1.400	1.341	1.314	1.294	1.281	1.302	1.297	1.293	1.290	1.293
36.15	37.73	49.56	50.49	51.13	51.52	41.22	41.35	41.43	41.48	41.53
2.450	2.601	2.749	2.837	2.900	2.941	2.965	2.980	2.989	2.994	2.996
6.078	6.314	6.599	6.825	7.063	7.307	7.546	7.793	8.041	8.291	8.541

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 1
1.291	1.289	1.286	1.273	1.270	1.266	
41.57	41.63	41.73	48.97	49.29	49.89	
2.998	2.999	2.999	3.000	3.000	3.000	
8.791	9.041	9.291	9.552	9.802	10.052	

58 CRESOL					C7H8O		pHL	3.00	3.25	3.50
-1	33.4	7.377			108.14		RE	□□□□□□	□□□□□□	□□□□□□
							t	23.80	22.79	22.08
							Z	0.012	0.015	0.018
							pHS	5.463	5.550	5.629

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
□□□□□□	85.181	60.064	52.789	44.885	36.899	30.724	25.974	21.256	10.974	10.027
21.52	21.08	18.34	18.25	18.17	18.09	20.52	20.49	20.47	18.18	18.17
0.021	0.027	0.038	0.043	0.051	0.062	0.075	0.088	0.108	0.213	0.233
5.712	5.806	5.964	6.022	6.096	6.186	6.272	6.351	6.447	6.790	6.841

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
8.860	7.590	4.643	4.319	3.931	3.533	3.047	2.897	2.752	2.637	2.558
18.17	18.16	24.94	24.95	24.96	24.98	18.10	18.11	18.11	18.12	18.14
0.265	0.310	0.513	0.553	0.609	0.679	0.798	0.841	0.886	0.926	0.957
6.912	7.007	7.372	7.441	7.540	7.672	7.938	8.063	8.232	8.436	8.685

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.514	2.485	2.467	2.450	2.442	2.435	
18.17	18.23	18.34	23.25	23.72	24.63	
0.974	0.985	0.991	0.996	0.998	0.999	
8.910	9.149	9.396	9.694	9.947	10.205	

59 m-CRESOL					C7H8O		pHL	3.00	3.25	3.50
-1	33.4	7.770			108.14		RE	□□□□□□	□□□□□□	□□□□□□
							t	23.79	22.78	22.08
							Z	0.008	0.009	0.011
							pHS	5.659	5.746	5.824

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
□□□□□□	□□□□□□	93.326	81.981	69.643	57.161	47.317	39.934	32.584	16.066	14.652
21.52	21.09	18.34	18.26	18.17	18.10	20.52	20.49	20.47	18.19	18.18
0.014	0.017	0.024	0.028	0.033	0.040	0.048	0.057	0.070	0.144	0.158
5.908	6.001	6.160	6.217	6.290	6.378	6.465	6.543	6.637	6.981	7.028

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
12.898	10.969	6.067	5.616	5.058	4.457	3.512	3.298	3.068	2.861	2.686
18.18	18.18	24.90	24.91	24.93	24.94	18.12	18.12	18.12	18.13	18.15
0.180	0.213	0.389	0.421	0.469	0.534	0.688	0.734	0.791	0.850	0.910
7.095	7.182	7.551	7.608	7.690	7.802	8.081	8.178	8.314	8.488	8.735

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.597	2.535	2.496	2.464	2.450	2.439	
18.18	18.24	18.35	23.26	23.73	24.64	
0.941	0.964	0.979	0.989	0.994	0.997	
8.936	9.163	9.403	9.699	9.949	10.206	

60 p-CRESOL					C7H8O		pHL	3.00	3.25	3.50
-1	33.4	7.959			108.14		RE	□□□□□□	□□□□□□	□□□□□□
							t	23.79	22.78	22.08
							Z	0.006	0.008	0.009
							pHS	5.753	5.840	5.919

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
□□□□□□	□□□□□□	□□□□□□	□□□□□□	86.177	70.693	58.401	49.261	40.153	19.470	17.746
21.52	21.09	18.34	18.26	18.18	18.10	20.52	20.49	20.47	18.19	18.19
0.011	0.014	0.020	0.022	0.026	0.032	0.039	0.046	0.057	0.119	0.130
6.002	6.095	6.254	6.311	6.384	6.472	6.559	6.636	6.729	7.074	7.120

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
15.601	13.234	7.023	6.490	5.824	5.095	3.830	3.580	3.299	3.034	2.785
18.19	18.18	24.89	24.90	24.91	24.93	18.13	18.13	18.13	18.14	18.16
0.149	0.175	0.335	0.363	0.406	0.465	0.629	0.675	0.734	0.800	0.876
7.185	7.270	7.639	7.692	7.769	7.873	8.157	8.243	8.365	8.525	8.770

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.667	2.579	2.522	2.478	2.458	2.444	
18.19	18.25	18.35	23.27	23.74	24.65	
0.916	0.947	0.969	0.984	0.991	0.995	
8.957	9.174	9.409	9.703	9.951	10.207	

61 CROTONIC ACID C4H6O2

-1	33.5	4.705	86.09				pHL	3.00	3.25	3.50
							RE	10.417	8.738	7.476
							t	24.46	23.20	22.33
							Z	0.224	0.268	0.314
							pHS	4.146	4.247	4.343

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.377	5.392	4.671	4.226	3.779	3.374	3.254	2.995	2.790	2.638	2.569
21.66	21.15	18.43	18.27	18.14	18.03	20.58	20.52	20.49	18.12	18.11
0.369	0.438	0.511	0.566	0.635	0.713	0.740	0.806	0.867	0.924	0.949
4.448	4.571	4.695	4.790	4.913	5.067	5.127	5.289	5.484	5.753	5.941

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.518	2.485	2.454	2.444	2.437	2.432	2.449	2.447	2.445	2.442	2.445
18.10	18.10	25.01	25.01	25.00	25.00	18.06	18.06	18.07	18.08	18.10
0.969	0.982	0.991	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.161	6.398	6.705	6.946	7.192	7.440	7.638	7.887	8.136	8.386	8.638

8.75	9.00	9.25	9.50	9.75	10.00
2.443	2.441	2.438	2.432	2.428	2.424
18.13	18.20	18.30	23.20	23.67	24.56
1.000	1.000	1.000	1.000	1.000	1.000
8.888	9.139	9.390	9.690	9.944	10.203

(Ref.) : 11 , 7

62 CYANIC ACID HCNO

-1	67.0	3.470	43.03				pHL	3.00	3.25	3.50
							RE	2.136	1.878	1.690
							t	17.37	16.54	15.98
							Z	0.548	0.625	0.695
							pHS	3.519	3.655	3.791

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.538	1.416	1.379	1.318	1.269	1.235	1.233	1.214	1.202	1.195	1.192
15.55	15.24	13.96	13.83	13.73	13.67	14.92	14.88	14.86	13.70	13.69
0.766	0.833	0.857	0.898	0.933	0.959	0.960	0.976	0.986	0.992	0.996
3.946	4.127	4.207	4.372	4.571	4.795	4.812	5.041	5.282	5.536	5.776

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.189	1.188	1.187	1.186	1.186	1.185	1.187	1.186	1.186	1.186	1.186
13.69	13.69	17.05	17.05	17.05	17.05	13.67	13.67	13.67	13.68	13.68
0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.022	6.271	6.532	6.780	7.030	7.280	7.520	7.770	8.020	8.270	8.520

8.75	9.00	9.25	9.50	9.75	10.00
1.186	1.186	1.186	1.186	1.185	1.185
13.69	13.71	13.75	16.03	16.13	16.32
1.000	1.000	1.000	1.000	1.000	1.000
8.770	9.020	9.270	9.528	9.779	10.029

(Ref.) : 2 , 4

63 CYANOACETIC ACID C3H3NO2

-1	45.0	2.469	85.06				pHL	3.00	3.25	3.50
							RE	2.035	1.947	1.889
							t	23.06	20.93	19.58
							Z	0.876	0.916	0.945
							pHS	3.281	3.470	3.667

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.850	1.824	1.828	1.814	1.804	1.798	1.797	1.794	1.791	1.796	1.794
18.70	18.16	16.33	16.04	15.86	15.76	17.66	17.60	17.57	15.82	15.81
0.966	0.980	0.980	0.988	0.993	0.996	0.996	0.998	0.999	0.999	1.000
3.881	4.112	4.126	4.349	4.587	4.832	4.849	5.096	5.344	5.582	5.830

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.794	1.792	1.789	1.789	1.788	1.787	1.794	1.794	1.793	1.792	1.794
15.81	15.81	20.89	20.89	20.88	20.88	15.78	15.78	15.78	15.79	15.80
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.080	6.330	6.614	6.864	7.114	7.364	7.580	7.830	8.080	8.330	8.580

8.75	9.00	9.25	9.50	9.75	10.00
1.793	1.792	1.791	1.788	1.787	1.785
15.82	15.86	15.92	19.43	19.67	20.10
1.000	1.000	1.000	1.000	1.000	1.000
8.831	9.081	9.332	9.611	9.864	10.117

(Ref.) : 1

64 m-CYANOBENZOIC ACID C8H5NO2

-1	31.3	3.598	147.13

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	4.581	4.058	3.668
t	27.13	25.14	23.80
Z	0.559	0.633	0.703
pHS	3.673	3.805	3.940

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.349	3.094	3.051	2.913	2.805	2.729	2.718	2.674	2.647	2.648	2.638
22.81	22.12	19.34	19.03	18.81	18.67	21.44	21.36	21.31	18.77	18.75
0.772	0.838	0.855	0.897	0.932	0.959	0.961	0.977	0.987	0.992	0.996
4.094	4.276	4.333	4.500	4.700	4.924	4.959	5.190	5.431	5.665	5.906

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.631	2.626	2.614	2.612	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.153	6.401	6.709	6.959	7.208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 3 , 7
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

65 CYCLOBUTANE-1,1-DICARBOXYLIC ACID C6H8O4

-1	25.5	3.127	144.13
-2	51.1	5.879	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	4.258	3.935	3.696
t	32.64	29.71	27.80
Z	0.753	0.817	0.872
pHS	3.567	3.721	3.881

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.502	3.343	3.343	3.223	3.090	2.932	2.894	2.708	2.503	2.253	2.119
26.52	25.81	22.46	22.34	22.59	23.23	26.90	27.93	29.16	27.68	28.54
0.922	0.968	0.976	1.015	1.061	1.122	1.136	1.220	1.329	1.506	1.611
4.064	4.272	4.308	4.505	4.726	4.959	5.005	5.230	5.454	5.760	5.941

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.999	1.905	1.815	1.780	1.756	1.739	1.758	1.753	1.748	1.745	1.747
29.30	29.90	40.12	40.34	40.48	40.54	30.88	30.91	30.93	30.95	30.98
1.717	1.810	1.895	1.934	1.961	1.977	1.986	1.992	1.996	1.998	1.999
6.145	6.366	6.667	6.886	7.122	7.366	7.587	7.832	8.081	8.330	8.581

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 2 , 1
1.745	1.742	1.740	1.728	1.724	1.720	
31.01	31.08	31.19	37.90	38.31	39.08	
1.999	2.000	2.000	2.000	2.000	2.000	
8.831	9.081	9.331	9.609	9.860	10.113	

66 CYCLOHEXANE-1,1-DICARBOXYLIC ACID C8H12O4

-1	24.0	3.451	172.18
-2	48.0	4.110	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	3.966	3.398	2.971
t	37.68	35.67	34.61
Z	0.877	1.032	1.191
pHS	3.607	3.737	3.871

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.623	2.348	2.309	2.160	2.046	1.970	1.958	1.914	1.886	1.891	1.881
34.13	34.08	30.53	30.70	30.91	31.10	35.02	35.14	35.22	31.78	31.80
1.362	1.535	1.581	1.701	1.804	1.880	1.886	1.932	1.961	1.977	1.987
4.025	4.206	4.260	4.432	4.636	4.863	4.887	5.120	5.362	5.603	5.846

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.874	1.869	1.852	1.849	1.846	1.842	1.873	1.871	1.869	1.866	1.871
31.81	31.82	42.27	42.26	42.23	42.20	31.80	31.80	31.81	31.81	31.84
1.993	1.996	1.998	1.999	1.999	2.000	2.000	2.000	2.000	2.000	2.000
6.093	6.342	6.628	6.877	7.127	7.376	7.591	7.841	8.091	8.341	8.592

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
1.868	1.866	1.863	1.849	1.845	1.840	
31.88	31.95	32.07	39.28	39.75	40.64	
2.000	2.000	2.000	2.000	2.000	2.000	
8.842	9.092	9.343	9.624	9.876	10.130	

67 CYCLOPENTANE-1,1-DICARBOXYLIC ACID C7H1004 158.15

-1	25.0	3.230	
-2	50.0	4.080	

	pHL	3.00	3.25	3.50
	RE	3.506	3.052	2.706
	t	36.94	34.89	33.84
	Z	0.953	1.104	1.256
	pHS	3.540	3.682	3.828

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.421	2.196	2.170	2.041	1.943	1.877	1.867	1.827	1.802	1.807	1.798
33.40	33.40	30.00	30.18	30.39	30.58	34.32	34.44	34.52	31.22	31.24
1.416	1.575	1.612	1.723	1.818	1.888	1.893	1.936	1.963	1.979	1.988
3.994	4.185	4.234	4.415	4.624	4.853	4.876	5.110	5.353	5.595	5.838

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.792	1.787	1.772	1.769	1.766	1.763	1.790	1.789	1.787	1.785	1.788
31.25	31.26	41.26	41.24	41.22	41.19	31.24	31.24	31.24	31.25	31.28
1.993	1.996	1.998	1.999	1.999	2.000	2.000	2.000	2.000	2.000	2.000
6.085	6.334	6.618	6.867	7.117	7.366	7.584	7.834	8.084	8.333	8.584

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
1.786	1.784	1.781	1.769	1.765	1.761	
31.31	31.37	31.49	38.37	38.80	39.61	
2.000	2.000	2.000	2.000	2.000	2.000	
8.834	9.085	9.335	9.614	9.866	10.119	

68 DECYLSULFONIC ACID C10H2203S 222.30

-1	26.9	1.000	

	pHI	3.00	3.25	3.50
	RE	3.074	3.070	3.067
	t	32.83	29.17	26.85
	Z	0.996	0.998	0.998
	pHS	3.377	3.577	3.778

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.065	3.063	3.084	3.083	3.080	3.077	3.071	3.068	3.065	3.086	3.085
25.33	24.39	21.26	20.77	20.46	20.28	23.54	23.44	23.38	20.40	20.38
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.995	4.227	4.232	4.454	4.691	4.936	4.968	5.214	5.463	5.688	5.936

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.082	3.079	3.062	3.061	3.058	3.055	3.087	3.085	3.082	3.079	3.084
20.37	20.36	29.07	29.06	29.06	29.05	20.32	20.33	20.34	20.35	20.38
1.000	1.000	1.000	1.000	1 000	1.000	1.000	1.000	1.000	1.000	1.000
6.185	6.435	6.752	7.002	7.252	7.502	7.686	7.936	8.186	8.436	8.688

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 12
3.081	3.078	3.073	3.060	3.054	3.045	
20.44	20.53	20.71	27.05	27.88	29.58	
1.000	1.000	1.000	1.000	1.000	1.000	
8.939	9.190	9.443	9.759	10.018	10.284	

69 DIBROMOFLUOROACETIC ACID C2HBr2FO2 235.84

-1	38.6	1.000	

	pHL	3.00	3.25	3.50
	RE	2.109	2.105	2.102
	t	25.94	23.13	21.40
	Z	0.995	0.997	0.998
	pHS	3.244	3.456	3.671

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.100	2.099	2.107	2.106	2.105	2.103	2.102	2.100	2.099	2.107	2.106
20.32	19.67	17.53	17.18	16.97	16.85	19.08	19.01	18.97	16.92	16.91
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.897	4.135	4.139	4.370	4.611	4.858	4.879	5.127	5.376	5.609	5.858

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.105	2.104	2.098	2.098	2.097	2.095	2.107	2.107	2.106	2.104	2.106
16.91	16.90	22.87	22.86	22.86	22.86	16.87	16.87	16.88	16.89	16.90
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.108	6.358	6.652	6.902	7.152	7.401	7.608	7.858	8.108	8.358	8.609

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 12
2.105	2.104	2.102	2.098	2.095	2.093	
16.93	16.97	17.06	21.22	21.56	22.18	
1.000	1.000	1.000	1.000	1.000	1.000	
8.859	9.110	9.361	9.650	9.903	10.159	

70	2,3-DIBROMOPROPIONIC ACID			C3H4Br2O2		pHL	3.00	3.25	3.50
	-1	32.3	2.201	231.87		RE	2.688	2.630	2.593
						t	28.66	25.68	23.78
						Z	0.938	0.960	0.974
						pHS	3.347	3.540	3.737

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.567	2.549	2.563	2.553	2.546	2.540	2.537	2.533	2.530	2.543	2.542
22.53	21.76	19.17	18.77	18.51	18.37	21.06	20.98	20.93	18.46	18.45
0.984	0.991	0.991	0.994	0.997	0.998	0.998	0.999	0.999	1.000	1.000
3.952	4.183	4.191	4.413	4.651	4.895	4.922	5.168	5.417	5.646	5.895

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.540	2.537	2.528	2.526	2.525	2.522	2.543	2.541	2.540	2.537	2.541
18.44	18.44	25.62	25.62	25.61	25.61	18.40	18.40	18.41	18.42	18.44
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.144	6.394	6.700	6.949	7.199	7.449	7.644	7.894	8.144	8.394	8.646

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.539	2.537	2.534	2.526	2.523	2.518	
18.48	18.54	18.66	23.77	24.28	25.27	
1.000	1.000	1.000	1.000	1.000	1.000	
8.896	9.147	9.399	9.701	9.956	10.215	

71	DICHLOROACETIC ACID (S)			C2H2Cl2O2		pHL	3.00	3.25	3.50
	-1	39.7	1.257	128.94		RE	2.057	2.050	2.045
						t	25.48	22.74	21.06
						Z	0.991	0.994	0.996
						pHS	3.237	3.449	3.664

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.042	2.039	2.047	2.046	2.044	2.043	2.041	2.040	2.038	2.046	2.045
20.01	19.37	17.30	16.96	16.75	16.63	18.80	18.74	18.70	16.71	16.70
0.998	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.891	4.129	4.133	4.364	4.606	4.853	4.873	5.121	5.370	5.604	5.853

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.044	2.043	2.038	2.037	2.036	2.035	2.046	2.046	2.044	2.043	2.045
16.69	16.69	22.48	22.48	22.47	22.47	16.65	16.66	16.66	16.67	16.68
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.102	6.352	6.645	6.895	7.145	7.394	7.602	7.852	8.102	8.352	8.604

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 7
2.044	2.043	2.041	2.037	2.035	2.033	
16.71	16.75	16.83	20.87	21.18	21.76	
1.000	1.000	1.000	1.000	1.000	1.000	
8.854	9.104	9.355	9.643	9.896	10.151	

72	DICHLOROFLUOROACETIC ACID			C2HCl2FO2		pHL	3.00	3 25	3.50
	-1	36.5	1.000	146.93		RE	2.235	2.231	2.228
						t	26.84	23.91	22.11
						Z	0.995	0.997	0.998
						pHS	3.264	3.474	3.686

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.226	2.225	2.234	2.233	2.232	2.230	2.228	2.227	2.225	2.235	2.234
20.97	20.28	18.02	17.64	17.42	17.29	19.66	19.59	19.55	17.37	17.36
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.911	4.148	4.152	4.382	4.623	4.869	4.892	5.139	5.388	5.620	5.869

6.00	6.25	6 50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.233	2.231	2.224	2.224	2.222	2.221	2.235	2.234	2.233	2.231	2.234
17.35	17.35	23.68	23.67	23.67	23.66	17.32	17.32	17.33	17.34	17.35
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.119	6.368	6.666	6.916	7.166	7.416	7.619	7.869	8.119	8.369	8.620

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 3 , 12
2.233	2.231	2.229	2.223	2.221	2.218	
17.38	17.43	17.52	21.96	22.34	23.06	
1.000	1.000	1.000	1.000	1.000	1.000	
8.870	9.121	9.372	9.665	9.919	10.176	

73 2.4-DICHLOROPHENOL C6H4Cl2O

	-1	31.3	7.699		163.00		pHL	3.00	3.25	3.50
							RE	□□□□□	□□□□□	□□□□□
							t	24.84	23.72	22.95
							Z	0.008	0.010	0.012
							pHS	5.628	5.715	5.794

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
□□□□□	□□□□□	91,443	80,177	67,993	55,733	46,287	38,990	31,774	15,933	14,509
22.34	21.87	18.94	18.84	18.75	18.67	21.26	21.23	21.21	18.78	18.77
0.015	0.019	0.027	0.030	0.036	0.044	0.053	0.063	0.077	0.156	0.171
5.878	5.972	6.127	6.186	6.259	6.349	6.435	6.513	6.609	6.949	6.997

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
12.756	10,843	6,132	5,670	5,106	4,509	3,641	3,423	3,196	2,997	2,839
18.77	18.77	25.98	25.99	26.00	26.03	18.72	18.72	18.73	18.74	18.76
0.195	0.230	0.413	0.447	0.498	0.566	0.712	0.758	0.814	0.870	0.922
7.066	7.155	7.521	7.582	7.669	7.786	8.058	8.162	8.306	8.488	8.735

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 3
2,756	2,699	2,663	2,632	2,619	2,608	
18.80	18.87	18.99	24.29	24.85	25.93	
0.950	0.970	0.983	0.991	0.995	0.997	
8.943	9.173	9.415	9.717	9.969	10.228	

74 2.4-DICHLOROPHENOXYACETIC ACID C8H6Cl2O3

	-1	25.0	1.000		221.00		pHL	3.00	3.25	3.50
							RE	3,320	3,316	3,313
							t	34.59	30.71	28.24
							Z	0.996	0.998	0.999
							pHS	3.405	3.602	3.801

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3,311	3,309	3,333	3,332	3,329	3,326	3,319	3,315	3,311	3,337	3,335
26.62	25.60	22.22	21.69	21.36	21.16	24.69	24.58	24.51	21.30	21.27
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
4.016	4.248	4.252	4.473	4.709	4.954	4.988	5.234	5.483	5.706	5.954

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3,332	3,328	3,308	3,306	3,303	3,299	3,337	3,335	3,332	3,328	3,334
21.26	21.25	30.66	30.65	30.64	30.63	21.21	21.22	21.23	21.25	21.28
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.203	6.453	6.775	7.024	7.274	7.524	7.704	7.954	8.204	8.454	8.707

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 2 , 12
3,331	3,326	3,322	3,305	3,297	3,286	
21.35	21.46	21.66	28.60	29.63	31.79	
1.000	1.000	1.000	1.000	1.000	1.000	
8.958	9.209	9.462	9.785	10.045	10.315	

75 DICHROMIC ACID H2Cr2O7

	-1	58.9	0.745		218.00		pHL	3.00	3.25	3.50
	-2	82.1	6.723				RE	1,359	1,357	1,355
							t	20.62	18.48	17.24
							Z	0.996	0.998	1.000
							pHS	3.097	3.330	3.564

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1,354	1,353	1,355	1,354	1,352	1,349	1,348	1,343	1,334	1,320	1,298
16.51	16.11	14.74	14.53	14.46	14.49	15.94	16.10	16.41	15.65	16.49
1.001	1.002	1.002	1.005	1.009	1.015	1.016	1.028	1.048	1.089	1.146
3.803	4.048	4.051	4.293	4.540	4.789	4.799	5.048	5.299	5.576	5.821

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1,266	1,227	1,166	1,133	1,103	1,079	1,070	1,017	1,054	1,051	1,049
17.69	19.20	26.43	27.92	29.25	30.28	25.29	14.52	25.89	26.03	26.11
1.232	1.347	1.528	1.643	1.750	1.838	1.904	1.006	1.966	1.980	1.989
6.064	6.305	6.624	6.826	7.046	7.280	7.536	4.350	8.015	8.263	8.513

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10
1,048	1,047	1,046	1,042	1,041	1,040	
26.17	26.23	26.29	30.26	30.43	30.72	
1.994	1.996	1.998	1.999	1.999	2.000	
8.762	9.011	9.261	9.513	9.763	10.013	

76 DIETHYLACETIC ACID C6H12O2

-1	30.3	4.734	160.17

pHL	3.00	3.25	3.50
RE	11.668	9.780	8.360
t	26.19	24.74	23.75
Z	0.221	0.265	0.311
pHS	4.169	4.271	4.367

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.122	6.016	5.240	4.731	4.223	3.766	3.628	3.335	3.104	2.938	2.859
22.99	22.43	19.42	19.25	19.09	18.98	21.81	21.75	21.71	19.09	19.08
0.366	0.435	0.505	0.561	0.630	0.710	0.737	0.804	0.865	0.922	0.949
4.472	4.596	4.715	4.811	4.935	5.090	5.149	5.313	5.508	5.773	5.962

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.801	2.763	2.726	2.715	2.707	2.701	2.723	2.721	2.718	2.715	2.719
19.07	19.06	26.75	26.74	26.74	26.73	19.03	19.03	19.04	19.05	19.07
0.968	0.981	0.991	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.183	6.419	6.733	6.973	7.220	7.468	7.660	7.909	8.158	8.408	8.660

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.717	2.714	2.710	2.701	2.697	2.691	
19.12	19.19	19.32	24.83	25.43	26.62	
1.000	1.000	1.000	1.000	1.000	1.000	
8.911	9.162	9.413	9.720	9.976	10.238	

77 DIETHYLMALONIC ACID C7H12O4

-1	25.0	2.211	116.16
-2	49.5	7.290	

pHL	3.00	3.25	3.50
RE	3.483	3.421	3.380
t	34.27	30.58	28.20
Z	0.948	0.966	0.978
pHS	3.435	3.623	3.814

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.351	3.330	3.354	3.341	3.328	3.314	3.305	3.285	3.256	3.239	3.169
26.62	25.62	22.23	21.72	21.42	21.27	24.81	24.79	24.89	21.95	22.37
0.987	0.993	0.993	0.997	1.000	1.004	1.005	1.010	1.019	1.034	1.059
4.024	4.251	4.260	4.477	4.712	4.955	4.991	5.236	5.483	5.734	5.978

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.062	2.912	2.576	2.413	2.250	2.105	2.010	1.941	1.888	1.852	1.835
23.04	24.00	35.80	36.93	38.06	39.06	30.02	30.48	30.83	31.06	31.23
1.100	1.162	1.325	1.425	1.539	1.657	1.774	1.846	1.902	1.941	1.966
6.221	6.461	6.855	7.037	7.232	7.440	7.685	7.885	8.109	8.347	8.597

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 7
1.822	1.812	1.806	1.791	1.786	1.781	
31.34	31.45	31.59	38.57	39.02	39.85	
1.980	1.989	1.994	1.997	1.998	1.999	
8.841	9.089	9.338	9.617	9.869	10.122	

78 DIFLUOROACETIC ACID C2H2F2O2

-1	40.6	1.000	96.03

pHL	3.00	3.25	3.50
RE	2.002	1.997	1.995
t	25.17	22.45	20.80
Z	0.995	0.997	0.998
pHS	3.226	3.440	3.657

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.993	1.991	1.998	1.998	1.996	1.995	1.994	1.992	1.991	1.998	1.998
19.76	19.14	17.12	16.78	16.58	16.47	18.59	18.52	18.49	16.54	16.53
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.885	4.123	4.127	4.359	4.602	4.848	4.868	5.116	5.365	5.600	5.849

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.997	1.996	1.991	1.990	1.989	1.988	1.999	1.998	1.997	1.996	1.998
16.52	16.52	22.18	22.18	22.17	22.17	16.49	16.49	16.50	16.51	16.52
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.098	6.348	6.639	6.889	7.139	7.389	7.598	7.848	8.098	8.348	8.599

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 12
1.997	1.995	1.994	1.990	1.988	1.986	
16.54	16.58	16.66	20.60	20.89	21.44	
1.000	1.000	1.000	1.000	1.000	1.000	
8.850	9.100	9.351	9.637	9.890	10.145	

79 2,4-DIHYDROXYBENZOIC ACID C7H604

-1	32.0	3.395	154.12				pHL	3.00	3.25	3.50
							RE	3.987	3.585	3.288
							t	27.09	24.99	23.57
							Z	0.630	0.703	0.768
							pHS	3.597	3.738	3.883

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.052	2.870	2.853	2.754	2.679	2.629	2.621	2.592	2.574	2.580	2.573
22.55	21.85	19.15	18.83	18.60	18.45	21.17	21.09	21.04	18.55	18.54
0.830	0.884	0.895	0.928	0.955	0.973	0.975	0.985	0.991	0.995	0.997
4.049	4.243	4.289	4.470	4.681	4.911	4.943	5.179	5.423	5.656	5.900

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.569	2.565	2.553	2.552	2.550	2.547	2.568	2.567	2.565	2.563	2.566
18.53	18.52	25.78	25.78	25.77	25.77	18.49	18.49	18.50	18.51	18.53
0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.147	6.396	6.703	6.952	7.202	7.452	7.646	7.896	8.146	8.396	8.648

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10
2.564	2.562	2.559	2.551	2.547	2.542	
18.57	18.64	18.76	23.92	24.44	25.46	
1.000	1.000	1.000	1.000	1.000	1.000	
8.898	9.149	9.401	9.704	9.959	10.219	

80 2,5-DIHYDROXYBENZOIC ACID C7H604

-1	34.4	2.975	154.12				pHL	3.00	3.25	3.50
							RE	3.065	2.845	2.690
							t	26.52	24.22	22.70
							Z	0.766	0.826	0.875
							pHS	3.456	3.618	3.786

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.574	2.492	2.496	2.451	2.419	2.399	2.395	2.383	2.375	2.383	2.380
21.65	20.96	18.50	18.16	17.93	17.79	20.31	20.24	20.19	17.88	17.87
0.916	0.947	0.950	0.968	0.981	0.989	0.990	0.994	0.997	0.998	0.999
3.976	4.190	4.217	4.421	4.648	4.887	4.914	5.157	5.403	5.636	5.882

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.378	2.375	2.367	2.366	2.364	2.362	2.379	2.378	2.376	2.375	2.378
17.86	17.86	24.59	24.58	24.58	24.57	17.82	17.83	17.83	17.84	17.86
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.131	6.381	6.682	6.932	7.182	7.432	7.631	7.881	8.131	8.381	8.632

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.376	2.374	2.372	2.365	2.362	2.358	
17.89	17.95	18.06	22.80	23.24	24.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.883	9.133	9.385	9.682	9.936	10.195	

81 2,6-DIHYDROXYBENZOIC ACID C7H604

-1	37.2	1.301	154.12				pHL	3.00	3.25	3.50
							RE	2.202	2.194	2.189
							t	26.50	23.63	21.86
							Z	0.990	0.994	0.996
							pHS	3.261	3.470	3.682

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.185	2.182	2.192	2.190	2.188	2.186	2.185	2.183	2.181	2.191	2.190
20.74	20.07	17.85	17.48	17.26	17.14	19.46	19.39	19.35	17.22	17.21
0.998	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.907	4.144	4.148	4.378	4.619	4.865	4.887	5.135	5.384	5.616	5.865

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.188	2.187	2.181	2.180	2.179	2.177	2.191	2.190	2.189	2.187	2.190
17.20	17.20	23.40	23.39	23.39	23.39	17.16	17.17	17.17	17.18	17.19
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.115	6.365	6.661	6.911	7.161	7.411	7.615	7.865	8.115	8.365	8.616

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.188	2.187	2.185	2.180	2.177	2.174	
17.22	17.27	17.36	21.71	22.07	22.75	
1.000	1.000	1.000	1.000	1.000	1.000	
8.867	9.117	9.368	9.660	9.914	10.170	

82	3,4-DIHYDROXYBENZOIC ACID			C7H604			pHL	3,00	3,25	3,50
	-1	34,4	4,509	154,12			RE	8,509	7,179	6,180
							t	24,19	22,92	22,04
							Z	0,268	0,318	0,371
							pHS	4,051	4,156	4,255

3,75	4,00	4,00	4,25	4,50	4,75	4,75	5,00	5,25	5,50	5,75
5,312	4,540	4,039	3,681	3,329	3,021	2,944	2,749	2,603	2,508	2,459
21,36	20,85	18,21	18,05	17,91	17,80	20,28	20,23	20,19	17,88	17,87
0,433	0,508	0,577	0,634	0,703	0,778	0,798	0,856	0,906	0,946	0,966
4,366	4,496	4,613	4,717	4,851	5,017	5,071	5,248	5,455	5,716	5,919

6,00	6,25	6,50	6,75	7,00	7,25	7,50	7,75	8,00	8,25	8,50
2,424	2,402	2,380	2,373	2,368	2,364	2,381	2,379	2,377	2,375	2,378
17,86	17,86	24,59	24,58	24,58	24,57	17,82	17,83	17,83	17,84	17,86
0,979	0,988	0,994	0,997	0,998	0,999	0,999	1,000	1,000	1,000	1,000
6,147	6,388	6,693	6,936	7,184	7,432	7,632	7,881	8,131	8,381	8,632

8,75	9,00	9,25	9,50	9,75	10,00	(Ref.) : 3
2,376	2,374	2,372	2,365	2,362	2,358	
17,89	17,95	18,06	22,80	23,24	24,08	
1,000	1,000	1,000	1,000	1,000	1,000	
8,883	9,133	9,385	9,682	9,936	10,195	

83	3,5-DIHYDROXYBENZOIC ACID			C7H604			pHL	3,00	3,25	3,50
	-1	34,4	4,051	154,12			RE	5,802	4,988	4,376
							t	24,71	23,23	22,22
							Z	0,397	0,463	0,529
							pHS	3,843	3,959	4,073

3,75	4,00	4,00	4,25	4,50	4,75	4,75	5,00	5,25	5,50	5,75
3,855	3,409	3,224	2,999	2,798	2,640	2,614	2,519	2,455	2,429	2,408
21,45	20,89	18,30	18,09	17,92	17,79	20,30	20,23	20,19	17,88	17,87
0,602	0,684	0,728	0,785	0,843	0,895	0,903	0,938	0,962	0,978	0,987
4,201	4,354	4,446	4,577	4,744	4,943	4,984	5,193	5,422	5,667	5,895

6,00	6,25	6,50	6,75	7,00	7,25	7,50	7,75	8,00	8,25	8,50
2,393	2,384	2,371	2,368	2,365	2,363	2,380	2,378	2,377	2,375	2,378
17,86	17,86	24,59	24,58	24,58	24,57	17,82	17,83	17,83	17,84	17,86
0,993	0,996	0,998	0,999	0,999	1,000	1,000	1,000	1,000	1,000	1,000
6,137	6,383	6,686	6,934	7,182	7,432	7,631	7,881	8,131	8,381	8,632

8,75	9,00	9,25	9,50	9,75	10,00	(Ref.) : 3
2,376	2,374	2,372	2,365	2,362	2,358	
17,89	17,95	18,06	22,80	23,24	24,08	
1,000	1,000	1,000	1,000	1,000	1,000	
8,883	9,133	9,385	9,682	9,936	10,195	

84	DIHYDROXYTARTARIC ACID			C4H608			pHL	3,00	3,25	3,50
	-1	32,0	1,947	182,09			RE	2,262	2,111	1,967
	-2	60,0	4,004				t	32,61	30,62	29,92
							Z	1,174	1,276	1,389
							pHS	3,310	3,507	3,702

3,75	4,00	4,00	4,25	4,50	4,75	4,75	5,00	5,25	5,50	5,75
1,832	1,713	1,706	1,627	1,567	1,525	1,519	1,492	1,476	1,478	1,472
29,90	30,22	27,50	27,84	28,15	28,38	31,45	31,60	31,70	28,99	29,02
1,514	1,641	1,663	1,760	1,842	1,902	1,905	1,943	1,967	1,981	1,989
3,906	4,122	4,162	4,363	4,584	4,819	4,835	5,073	5,317	5,563	5,807

6,00	6,25	6,50	6,75	7,00	7,25	7,50	7,75	8,00	8,25	8,50
1,468	1,465	1,455	1,454	1,452	1,449	1,467	1,466	1,465	1,464	1,466
29,04	29,05	37,26	37,25	37,24	37,22	29,03	29,03	29,04	29,04	29,06
1,994	1,996	1,998	1,999	1,999	2,000	2,000	2,000	2,000	2,000	2,000
6,055	6,304	6,576	6,825	7,075	7,324	7,554	7,803	8,053	8,303	8,554

8,75	9,00	9,25	9,50	9,75	10,00	(Ref.) · 12 , 7
1,465	1,463	1,462	1,454	1,451	1,449	
29,09	29,13	29,22	34,82	35,11	35,64	
2,000	2,000	2,000	2,000	2,000	2,000	
8,804	9,054	9,304	9,572	9,823	10,075	

85 2,3-DIMETHYLBENZOIC ACID C9H10O2 150.18

-1 27.1 3.738

pHL	3.00	3.25	3.50
RE	5.679	5.001	4.491
t	29.86	27.61	26.09
Z	0.523	0.596	0.665
pHS	3.751	3.878	4.007

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.067	3.722	3.657	3.471	3.319	3.212	3.193	3.130	3.090	3.091	3.077
24.97	24.19	20.94	20.60	20.35	20.19	23.42	23.32	23.27	20.31	20.29
0.737	0.808	0.829	0.875	0.917	0.948	0.952	0.971	0.983	0.990	0.994
4.155	4.330	4.390	4.550	4.743	4.963	5.002	5.230	5.470	5.700	5.940

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.067	3.060	3.041	3.038	3.035	3.032	3.063	3.061	3.058	3.055	3.060
20.28	20.28	28.92	28.91	28.90	28.89	20.24	20.24	20.25	20.27	20.30
0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.186	6.434	6.752	7.000	7.250	7.500	7.684	7.934	8.184	8.434	8.687

8.75	9.00	9.25	9.50	9.75	10.00
3.057	3.054	3.049	3.036	3.030	3.022
20.35	20.44	20.61	26.90	27.72	29.38
1.000	1.000	1.000	1.000	1.000	1.000
8.937	9.188	9.441	9.757	10.015	10.281

(Ref.) : 11 , 1

86 2,4-DIMETHYLBENZOIC ACID C9H10O2 150.18

-1 27.1 4.182

pHL	3.00	3.25	3.50
RE	7.891	6.765	5.912
t	29.08	27.14	25.82
Z	0.372	0.436	0.500
pHS	3.932	4.045	4.156

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.181	4.552	4.303	3.980	3.687	3.455	3.409	3.269	3.174	3.139	3.106
24.83	24.12	20.81	20.55	20.33	20.18	23.39	23.31	23.26	20.31	20.29
0.573	0.655	0.700	0.758	0.821	0.878	0.889	0.928	0.956	0.974	0.985
4.282	4.431	4.518	4.646	4.809	5.004	5.050	5.257	5.484	5.723	5.950

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.084	3.069	3.046	3.041	3.037	3.033	3.064	3.061	3.059	3.055	3.060
20.28	20.27	28.92	28.91	28.90	28.89	20.24	20.24	20.25	20.27	20.30
0.991	0.995	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.190	6.436	6.754	7.001	7.250	7.500	7.684	7.934	8.184	8.434	8.687

8.75	9.00	9.25	9.50	9.75	10.00
3.057	3.054	3.049	3.036	3.030	3.022
20.35	20.44	20.61	26.90	27.72	29.38
1.000	1.000	1.000	1.000	1.000	1.000
8.937	9.188	9.441	9.757	10.015	10.281

(Ref.) : 11 , 1

87 2,5-DIMETHYLBENZOIC ACID C9H10O2 150.18

-1 27.1 3.977

pHL	3.00	3.25	3.50
RE	6.727	5.832	5.156
t	29.42	27.35	25.94
Z	0.439	0.508	0.576
pHS	3.845	3.965	4.083

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.583	4.100	3.956	3.702	3.482	3.317	3.287	3.189	3.125	3.111	3.089
24.90	24.15	20.87	20.57	20.34	20.18	23.41	23.32	23.27	20.31	20.29
0.651	0.731	0.764	0.818	0.872	0.916	0.923	0.952	0.972	0.983	0.990
4.219	4.379	4.454	4.596	4.774	4.981	5.024	5.242	5.476	5.710	5.944

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.074	3.064	3.043	3.039	3.036	3.032	3.063	3.061	3.058	3.055	3.060
20.28	20.28	28.92	28.91	28.90	28.89	20.24	20.24	20.25	20.27	20.30
0.994	0.997	0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.188	6.435	6.753	7.001	7.250	7.500	7.684	7.934	8.184	8.434	8.687

8.75	9.00	9.25	9.50	9.75	10.00
3.057	3.054	3.049	3.036	3.030	3.022
20.35	20.44	20.61	26.90	27.72	29.38
1.000	1.000	1.000	1.000	1.000	1.000
8.937	9.188	9.441	9.757	10.015	10 281

(Ref.) : 11 , 1

88	2.6-DIMETHYLBENZOIC ACID			C9H1002		pHL	3.00	3.25	3.50
	-1	27.1	3.246	150.18		RE	4.280	3.917	3.653
						t	30.85	28.18	26.38
						Z	0.701	0.768	0.825
						pHS	3.585	3.734	3.888

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.446	3.292	3.295	3.210	3.147	3.106	3.097	3.073	3.057	3.072	3.066
25.10	24.24	21.06	20.65	20.36	20.19	23.43	23.33	23.27	20.31	20.29
0.877	0.919	0.925	0.950	0.969	0.982	0.983	0.990	0.994	0.997	0.998
4.064	4.267	4.299	4.490	4.709	4.944	4.979	5.218	5.464	5.691	5.936

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.061	3.056	3.040	3.037	3.035	3.031	3.063	3.061	3.058	3.055	3.060
20.28	20.28	28.92	28.91	28.90	28.89	20.24	20.24	20.25	20.27	20.30
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.184	6.434	6.751	7.000	7.250	7.499	7.684	7.934	8.184	8.434	8.687

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 11 , 1
3.057	3.054	3.049	3.036	3.030	3.022	
20.35	20.44	20.61	26.90	27.72	29.38	
1.000	1.000	1.000	1.000	1.000	1.000	
8.937	9.188	9.441	9.757	10.015	10.281	

89	3.4-DIMETHYLBENZOIC ACID			C9H1002		pHL	3.00	3.25	3.50
	-1	27.1	4.408	150.18		RE	9.540	8.094	6.999
						t	28.76	26.94	25.70
						Z	0.306	0.362	0.420
						pHS	4.032	4.140	4.244

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.053	5.224	4.806	4.394	4.005	3.679	3.604	3.402	3.258	3.185	3.135
24.76	24.08	20.75	20.51	20.32	20.17	23.38	23.30	23.26	20.31	20.29
0.488	0.568	0.623	0.684	0.753	0.822	0.838	0.890	0.930	0.959	0.975
4.361	4.499	4.597	4.712	4.859	5.038	5.090	5.282	5.498	5.744	5.960

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.101	3.079	3.051	3.044	3.038	3.033	3.064	3.062	3.059	3.055	3.060
20.28	20.27	28.92	28.91	28.90	28.89	20.24	20.24	20.25	20.27	20.30
0.985	0.992	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.195	6.439	6.757	7.002	7.251	7.500	7.685	7.934	8.184	8.434	8.687

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 11 , 1
3.057	3.054	3.049	3.036	3.030	3.022	
20.35	20.44	20.61	26.90	27.72	29.38	
1.000	1.000	1.000	1.000	1.000	1.000	
8.937	9.188	9.441	9.757	10.015	10.281	

90	3.5-DIMETHYLBENZOIC ACID			C9H1002		pHL	3.00	3.25	3.50
	-1	27.1	4.301	150.18		RE	8.706	7.420	6.448
						t	28.91	27.03	25.76
						Z	0.336	0.396	0.457
						pHS	3.984	4.094	4.202

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.610	4.880	4.550	4.182	3.841	3.563	3.503	3.332	3.213	3.161	3.120
24.79	24.10	20.78	20.53	20.32	20.18	23.39	23.31	23.26	20.31	20.29
0.528	0.609	0.660	0.720	0.786	0.850	0.864	0.910	0.944	0.967	0.980
4.323	4.466	4.558	4.680	4.834	5.021	5.070	5.269	5.491	5.733	5.955

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.092	3.074	3.048	3.042	3.037	3.033	3.064	3.061	3.059	3.055	3.060
20.28	20.27	28.92	28.91	28.90	28.89	20.24	20.24	20.25	20.27	20.30
0.988	0.993	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.193	6.437	6.755	7.002	7.250	7.500	7.684	7.934	8.184	8.434	8.687

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 11 , 1
3.057	3.054	3.049	3.036	3.030	3.022	
20.35	20.44	20.61	26.90	27.72	29.38	
1.000	1.000	1.000	1.000	1.000	1.000	
8.937	9.188	9.441	9.757	10.015	10.281	

91 DIMETHYLMALONIC ACID C5H8O4

-1	25.5	3.166	132.12				pHL	3.00	3.25	3.50
-2	51.1	6.059					RE	4.339	4.000	3.750
							t	32.53	29.62	27.71
							Z	0.738	0.803	0.858
							pHS	3.577	3.729	3.888

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.551	3.392	3.394	3.284	3.170	3.039	3.007	2.845	2.653	2.388	2.234
26.40	25.62	22.26	22.04	22.13	22.58	26.19	27.03	28.17	26.80	27.78
0.909	0.953	0.960	0.994	1.032	1.079	1.089	1.156	1.246	1.412	1.519
4.069	4.275	4.309	4.505	4.726	4.960	5.005	5.235	5.465	5.779	5.962

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.090	1.971	1.850	1.804	1.771	1.748	1.764	1.756	1.750	1.746	1.748
28.70	29.46	39.86	40.17	40.37	40.48	30.84	30.89	30.92	30.94	30.97
1.634	1.742	1.854	1.905	1.942	1.966	1.980	1.988	1.993	1.996	1.998
6.162	6.378	6.687	6.896	7.127	7.368	7.590	7.834	8.081	8.330	8.581

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 7
1.745	1.743	1.740	1.728	1.724	1.720	
31.01	31.07	31.18	37.90	38.31	39.08	
1.999	1.999	2.000	2.000	2.000	2.000	
8.831	9.081	9.331	9.609	9.860	10.113	

92 2.6-DINITROBENZOIC ACID C7H4N2O6

-1	31.3	1.140	212.12				pHL	3.00	3.25	3.50
							RE	2.628	2.622	2.618
							t	29.60	26.34	24.30
							Z	0.994	0.996	0.998
							pHS	3.321	3.525	3.731

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.616	2.613	2.628	2.626	2.624	2.622	2.618	2.616	2.613	2.628	2.627
22.98	22.18	19.51	19.08	18.82	18.67	21.45	21.37	21.32	18.77	18.75
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.952	4.186	4.191	4.417	4.656	4.901	4.929	5.175	5.424	5.653	5.901

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.625	2.623	2.612	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.151	6.400	6.708	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

93 3.5-DINITROBENZOIC ACID C7H4N2O6

-1	29.3	2.824	212.12				pHL	3.00	3.25	3.50
							RE	3.373	3.187	3.058
							t	29.90	27.07	25.19
							Z	0.824	0.874	0.912
							pHS	3.462	3.631	3.806

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.963	2.897	2.910	2.873	2.847	2.830	2.825	2.814	2.807	2.822	2.819
23.91	23.08	20.19	19.77	19.50	19.33	22.32	22.23	22.17	19.45	19.43
0.942	0.964	0.966	0.979	0.987	0.993	0.993	0.996	0.998	0.999	0.999
4.003	4.222	4.240	4.449	4.679	4.920	4.950	5.194	5.442	5.670	5.917

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.816	2.813	2.800	2.798	2.796	2.793	2.819	2.818	2.815	2.813	2.817
19.42	19.41	27.38	27.37	27.36	27.35	19.37	19.38	19.39	19.40	19.43
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.166	6.415	6.727	6.977	7.227	7.477	7.666	7.916	8.166	8.416	8.668

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.815	2.811	2.808	2.797	2.793	2.786	
19.47	19.55	19.69	25.42	26.08	27.39	
1.000	1.000	1.000	1.000	1.000	1.000	
8.919	9.169	9.421	9.731	9.988	10.250	

94	2,3-DINITROPHENOL			C6H4N2O5		pHL	3.00	3.25	3.50
	-1	31.3	4.018	184.11		RE	6.137	5.293	4.658
						t	26.43	24.73	23.58
						Z	0.414	0.481	0.549
						pHS	3.842	3.959	4.075

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.118	3.658	3.490	3.254	3.046	2.886	2.859	2.763	2.699	2.678	2.656
22.71	22.08	19.24	18.99	18.80	18.66	21.43	21.36	21.31	18.77	18.75
0.623	0.704	0.743	0.799	0.855	0.904	0.912	0.944	0.967	0.981	0.988
4.206	4.362	4.446	4.583	4.754	4.956	4.998	5.211	5.442	5.682	5.913

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.642	2.632	2.617	2.614	2.611	2.608	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.156	6.403	6.711	6.959	7.208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

95	2,4-DINITROPHENOL			C6H4N2O5		pHL	3.00	3.25	3.50
	-1	31.3	4.110	184.11		RE	6.592	5.658	4.955
						t	26.29	24.65	23.53
						Z	0.384	0.449	0.515
						pHS	3.881	3.996	4.108

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.354	3.837	3.624	3.363	3.127	2.941	2.907	2.795	2.719	2.689	2.663
22.68	22.07	19.22	18.98	18.80	18.66	21.43	21.36	21.31	18.77	18.75
0.588	0.670	0.715	0.772	0.832	0.887	0.896	0.933	0.959	0.976	0.986
4.235	4.386	4.476	4.606	4.770	4.967	5.010	5.218	5.446	5.689	5.916

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.646	2.634	2.618	2.614	2.611	2.608	2.629	2.628	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.992	0.995	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.157	6.403	6.712	6.960	7.209	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3 , 1
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

96	2,5-DINITROPHENOL			C6H4N2O5		pHL	3.00	3.25	3.50
	-1	31.3	5.216	184.11		RE	18.229	15.122	12.792
						t	25.28	24.01	23.14
						Z	0.136	0.164	0.194
						pHS	4.397	4.493	4.581

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
10.752	8.904	7.235	6.453	5.638	4.860	4.523	4.022	3.581	3.123	2.980
22.47	21.95	19.02	18.88	18.76	18.66	21.36	21.32	21.29	18.76	18.75
0.232	0.281	0.350	0.393	0.451	0.526	0.566	0.639	0.720	0.835	0.876
4.677	4.787	4.923	5.002	5.104	5.232	5.302	5.433	5.594	5.885	6.030

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.854	2.762	2.679	2.651	2.632	2.620	2.637	2.632	2.628	2.624	2.628
18.74	18.74	26.16	26.16	26.15	26.15	18.70	18.71	18.71	18.73	18.75
0.916	0.947	0.974	0.984	0.991	0.995	0.997	0.998	0.999	0.999	1.000
6.217	6.434	6.752	6.976	7.215	7.461	7.656	7.903	8.152	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3 , 1
2.625	2.622	2.619	2.611	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.904	9.154	9.406	9.710	9.966	10.226	

97	2,6-DINITROPHENOL				C6H4N2O5		pHL	3.00	3.25	3.50
	-1	31.3	3.706		184.11		RE	4.911	4.317	3.873
							t	26.94	25.03	23.74
							Z	0.521	0.594	0.664
							pHS	3.714	3.842	3.971

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.505	3.206	3.140	2.980	2.850	2.758	2.744	2.690	2.656	2.653	2.641
22.79	22.11	19.31	19.02	18.81	18.66	21.44	21.36	21.31	18.77	18.75
0.736	0.807	0.830	0.876	0.917	0.948	0.952	0.971	0.983	0.990	0.994
4.119	4.294	4.359	4.518	4.711	4.930	4.966	5.194	5.433	5.668	5.907

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.633	2.627	2.614	2.612	2.610	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.153	6.402	6.710	6.959	7.208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

98	3,4-DINITROPHENOL				C6H4N2O5		pHL	3.00	3.25	3.50
	-1	31.3	5.424		184.11		RE	22.598	18.690	15.762
							t	25.19	23.95	23.10
							Z	0.109	0.132	0.157
							pHS	4.498	4.592	4.679

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
13.196	10.865	8.613	7.652	6.642	5.664	5.187	4.560	3.991	3.316	3.139
22.44	21.94	19.00	18.87	18.75	18.66	21.35	21.31	21.28	18.76	18.75
0.188	0.229	0.292	0.330	0.381	0.449	0.491	0.561	0.643	0.784	0.830
4.772	4.879	5.018	5.093	5.189	5.308	5.382	5.501	5.649	5.950	6.078

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.971	2.838	2.715	2.674	2.646	2.628	2.642	2.635	2.630	2.626	2.628
18.75	18.74	26.16	26.16	26.15	26.15	18.70	18.71	18.71	18.73	18.75
0.879	0.921	0.960	0.975	0.985	0.992	0.995	0.997	0.998	0.999	0.999
6.247	6.451	6.774	6.986	7.220	7.463	7.660	7.904	8.152	8.401	8.654

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.625	2.623	2.619	2.611	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.904	9.154	9.406	9.710	9.966	10.226	

99	3,5-DINITROPHENOL				C6H4N2O5		pHL	3.00	3.25	3.50
	-1	31.3	6.699		184.11		RE	91.107	74.708	62.465
							t	24.90	23.76	22.97
							Z	0.027	0.032	0.039
							pHS	5.129	5.218	5.298

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
51.713	41.886	30.334	26.656	22.695	18.729	15.913	13.504	11.147	6.575	6.033
22.35	21.88	18.94	18.84	18.75	18.66	21.28	21.25	21.23	18.76	18.76
0.047	0.058	0.081	0.092	0.108	0.132	0.156	0.184	0.223	0.386	0.421
5.383	5.480	5.632	5.693	5.770	5.865	5.949	6.035	6.139	6.472	6.536

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
5.390	4.722	3.536	3.333	3.123	2.941	2.826	2.755	2.702	2.667	2.652
18.75	18.75	26.08	26.10	26.11	26.12	18.71	18.71	18.72	18.73	18.75
0.473	0.542	0.729	0.775	0.829	0.882	0.927	0.952	0.970	0.983	0.990
6.625	6.743	7.098	7.204	7.351	7.537	7.766	7.955	8.175	8.412	8.663

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.639	2.630	2.624	2.613	2.608	2.602	
18.79	18.86	18.98	24.28	24.83	25.92	
0.994	0.997	0.998	0.999	1.000	1.000	
8.908	9.156	9.407	9.711	9.966	10.227	

100 DIPHENYLACETIC ACID C14H12O2

-1	26.2	3.939	212.20

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	6.729	5.853	5.190	4.629	4.160	4.034	3.784	3.571	3.413	3.384
t	30.24	28.06	26.57	25.47	24.69	21.31	20.99	20.74	20.58	23.92
Z	0.455	0.525	0.594	0.668	0.747	0.777	0.830	0.881	0.923	0.930
pHS	3.835	3.956	4.076	4.214	4.378	4.448	4.594	4.775	4.985	5.027

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
3.290	3.230	3.221	3.199	3.185	3.175	3.153	3.149	3.145	3.141	3.175
23.83	23.77	20.71	20.69	20.68	20.67	29.63	29.62	29.61	29.60	20.64
0.957	0.974	0.985	0.991	0.995	0.997	0.999	0.999	1.000	1.000	1.000
5.248	5.483	5.716	5.951	6.196	6.443	6.763	7.011	7.260	7.510	7.692

7.75	8.00	8.25	8.50	8.75	9.00	9.25
3.173	3.170	3.167	3.172	3.169	3.165	3.160
20.64	20.65	20.66	20.70	20.76	20.86	21.04
1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.942	8.192	8.442	8.695	8.946	9.197	9.449

9.50	9.75	10.00	(Ref.) : 2 , 7	
3.145	3.139	3.130		
27.59	28.49	30.34		
1.000	1.000	1.000		
9.769	10.027	10.295		

101 DIPROPYLMALONIC ACID C9H16O4

-1	23.0	2.067	188.22
-2	46.0	7.510	

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	3.743	3.697	3.666	3.645	3.630	3.658	3.648	3.638	3.626	3.616
t	36.55	32.53	29.94	28.21	27.12	23.42	22.86	22.51	22.33	26.19
Z	0.964	0.976	0.985	0.991	0.995	0.995	0.998	1.000	1.003	1.003
pHS	3.458	3.646	3.837	4.047	4.274	4.282	4.498	4.733	4.976	5.013

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
3.601	3.578	3.579	3.526	3.442	3.316	2.992	2.803	2.605	2.417	2.275
26.13	26.16	22.82	23.09	23.55	24.27	36.53	37.70	38.92	40.09	30.52
1.006	1.012	1.021	1.037	1.064	1.108	1.231	1.322	1.432	1.554	1.693
5.259	5.506	5.745	5.991	6.237	6.481	6.879	7.073	7.272	7.480	7.728

7.75	8.00	8.25	8.50	8.75	9.00	9.25
2.175	2.095	2.038	2.007	1.985	1.970	1.960
31.12	31.59	31.93	32.18	32.34	32.48	32.66
1.779	1.854	1.909	1.947	1.969	1.982	1.990
7.918	8.134	8.367	8.617	8.858	9.104	9.353

9.50	9.75	10.00	(Ref.) : 12 , 7	
1.941	1.934	1.928		
40.26	40.79	41.79		
1.995	1.997	1.998		
9.636	9.888	10.142		

102 DITHIONIC ACID H2S2O6

-1	48.2	0.200	162.13
-2	96.4	3.400	

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	1.208	1.114	1.039	0.983	0.944	0.943	0.920	0.904	0.895	0.894
t	28.62	27.30	26.79	26.62	26.60	24.87	24.88	24.91	24.93	26.76
Z	1.421	1.550	1.671	1.775	1.855	1.862	1.914	1.948	1.970	1.970
pHS	3.118	3.340	3.557	3.780	4.013	4.036	4.264	4.503	4.748	4.748

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
0.888	0.885	0.885	0.884	0.884	0.883	0.880	0.880	0.879	0.879	0.883
26.78	26.79	25.11	25.11	25.12	25.12	30.06	30.06	30.05	30.05	25.09
1.983	1.990	1.995	1.997	1.998	1.999	1.999	2.000	2.000	2.000	2.000
4.994	5.242	5.496	5.744	5.994	6.243	6.487	6.736	6.986	7.236	7.493

7.75	8.00	8.25	8.50	8.75	9.00	9.25
0.883	0.883	0.883	0.883	0.883	0.883	0.883
25.09	25.10	25.11	25.11	25.12	25.15	25.19
2.000	2.000	2.000	2.000	2.000	2.000	2.000
7.743	7.993	8.243	8.493	8.743	8.993	9.243

9.50	9.75	10.00	(Ref.) : 2 , 8	
0.880	0.880	0.879		
28.52	28.64	28.86		
2.000	2.000	2.000		
9.487	9.737	9.987		

103	DITHIONOUS ACID				H2S2O4		pHL	3.00	3.25	3.50
	-1	34.5	0.300		130.13		RE	1.349	1.313	1.290
	-2	68.9	2.500				t	38.20	34.76	32.73
							Z	1.852	1.906	1.943
							pHS	3.110	3.334	3.563

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.276	1.267	1.274	1.269	1.265	1.263	1.260	1.258	1.256	1.263	1.263
31.53	30.83	28.34	27.95	27.72	27.60	30.24	30.17	30.13	27.71	27.70
1.966	1.980	1.981	1.989	1.994	1.996	1.996	1.998	1.999	1.999	2.000
3.800	4.043	4.048	4.289	4.535	4.784	4.790	5.039	5.288	5.534	5.783

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.262	1.261	1.254	1.254	1.252	1.251	1.263	1.263	1.262	1.261	1.262
27.69	27.69	34.75	34.74	34.73	34.72	27.65	27.65	27.65	27.66	27.67
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
6.033	6.283	6.546	6.796	7.046	7.295	7.533	7.783	8.033	8.283	8.533

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.)	·	2	,	8
1.262	1.261	1.260	1.254	1.253	1.251					
27.69	27.73	27.80	32.60	32.82	33.23					
2.000	2.000	2.000	2.000	2.000	2.000					
8.783	9.034	9.284	9.544	9.794	10.045					

104	DODECYLSULFONIC ACID				C12H26O3S		pHL	3.00	3.25	3.50
	-1	24.9	1.000		250.40		RE	3.334	3.330	3.327
							t	34.69	30.80	28.32
							Z	0.996	0.998	0.999
							pHS	3.407	3.604	3.803

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.325	3.323	3.348	3.346	3.344	3.340	3.333	3.329	3.326	3.351	3.349
26.69	25.67	22.28	21.74	21.41	21.21	24.76	24.64	24.57	21.35	21.32
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
4.018	4.249	4.254	4.474	4.711	4.955	4.989	5.235	5.484	5.707	5.955

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.346	3.342	3.322	3.320	3.317	3.313	3.352	3.349	3.346	3.343	3.349
21.31	21.30	30.75	30.74	30.73	30.72	21.26	21.27	21.28	21.30	21.34
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.204	6.454	6.776	7.026	7.275	7.525	7.705	7.955	8.205	8.455	8.708

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.)	:	2	,	12
3.345	3.341	3.336	3.318	3.311	3.300					
21.40	21.51	21.72	28.69	29.73	31.93					
1.000	1.000	1.000	1.000	1.000	1.000					
8.959	9.210	9.463	9.787	10.047	10.317					

105	ENANTHYLIC ACID				C7H14O2		pHL	3.00	3.25	3.50
	-1	28.4	4.893		130.19		RE	14.349	11.979	10.194
							t	27.30	25.76	24.71
							Z	0.192	0.230	0.271
							pHS	4.251	4.351	4.444

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
8.638	7.241	6.209	5.574	4.933	4.346	4.147	3.769	3.462	3.219	3.114
23.91	23.31	20.09	19.92	19.76	19.64	22.66	22.61	22.57	19.77	19.76
0.321	0.385	0.454	0.507	0.575	0.656	0.688	0.759	0.829	0.901	0.932
4.547	4.667	4.787	4.879	4.996	5.142	5.206	5.360	5.545	5.815	5.993

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.033	2.979	2.927	2.911	2.900	2.892	2.918	2.915	2.911	2.908	2.912
19.75	19.75	27.97	27.97	27.96	27.95	19.71	19.71	19.72	19.74	19.76
0.957	0.974	0.988	0.993	0.996	0.998	0.998	0.999	1.000	1.000	1.000
6.206	6.438	6.756	6.994	7.239	7.487	7.675	7.924	8.173	8.423	8.676

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.)	,	2	,	7
2.909	2.906	2.902	2.890	2.885	2.878					
19.81	19.90	20.05	25.99	26.71	28.15					
1.000	1.000	1.000	1.000	1.000	1.000					
8.926	9.177	9.429	9.741	9.998	10.262					

106 o-ETHOXYBENZOIC ACID C9H10O3

	-1	26.6	4.208

166.18

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	8.187	7.011	6.121	5.357	4.697	4.433	4.095	3.787	3.542	3.493
t	29.45	27.48	26.13	25.13	24.41	21.03	20.76	20.55	20.39	23.67
Z	0.365	0.428	0.492	0.565	0.647	0.692	0.751	0.815	0.873	0.885
pHS	3.946	4.058	4.169	4.294	4.442	4.529	4.656	4.818	5.011	5.058

	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25
	3.344	3.243	3.205	3.170	3.147	3.131	3.106	3.101	3.097	3.092
	23.59	23.54	20.53	20.51	20.50	20.49	29.31	29.30	29.29	29.28
	0.925	0.954	0.973	0.984	0.991	0.995	0.997	0.999	0.999	1.000
	5.264	5.490	5.729	5.955	6.195	6.441	6.760	7.007	7.256	7.505

	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75
	3.125	3.123	3.120	3.116	3.122	3.118	3.115	3.110	3.096	3.090
	20.45	20.46	20.47	20.48	20.52	20.57	20.67	20.85	27.28	28.14
	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	7.689	7.938	8.188	8.438	8.691	8.942	9.193	9.445	9.763	10.022

10.00	(Ref.) : 11 , 2
3.081	
29.90	
1.000	
10.288	

107 p-ETHOXYBENZOIC ACID C9H10O3

	-1	26.6	4.796

166.18

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	13.806	11.558	9.861	8.384	7.064	6.179	5.560	4.945	4.393	4.221
t	28.73	27.01	25.84	24.95	24.30	20.87	20.67	20.50	20.37	23.61
Z	0.214	0.256	0.301	0.355	0.424	0.490	0.546	0.616	0.697	0.725
pHS	4.212	4.314	4.410	4.515	4.639	4.752	4.848	4.972	5.126	5.187

	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25
	3.867	3.588	3.391	3.294	3.223	3.176	3.128	3.113	3.104	3.096
	23.56	23.52	20.52	20.51	20.50	20.49	29.30	29.30	29.29	29.28
	0.794	0.858	0.917	0.945	0.966	0.980	0.990	0.994	0.997	0.998
	5.351	5.544	5.805	5.994	6.214	6.450	6.771	7.011	7.258	7.506

	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75
	3.127	3.124	3.120	3.117	3.122	3.119	3.115	3.110	3.096	3.090
	20.45	20.46	20.47	20.48	20.52	20.57	20.67	20.85	27.28	28.14
	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	7.690	7.939	8.189	8.439	8.691	8.942	9.193	9.445	9.763	10.022

10.00	(Ref.) : 11 , 2
3.081	
29.90	
1.000	
10.288	

108 o-ETHYLBENZOIC ACID C9H10O2

	-1	26.5	3.793

150.18

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	6.008	5.274	4.721	4.258	3.879	3.801	3.596	3.428	3.307	3.286
t	30.26	27.99	26.46	25.33	24.53	21.21	20.87	20.61	20.44	23.75
Z	0.505	0.577	0.647	0.720	0.793	0.816	0.864	0.908	0.942	0.947
pHS	3.776	3.901	4.028	4.173	4.345	4.407	4.563	4.754	4.971	5.012

	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25
	3.215	3.170	3.169	3.153	3.142	3.134	3.114	3.111	3.108	3.104
	23.66	23.60	20.58	20.56	20.54	20.54	29.39	29.38	29.37	29.36
	0.968	0.981	0.989	0.994	0.996	0.998	0.999	0.999	1.000	1.000
	5.238	5.477	5.707	5.946	6.192	6.440	6.759	7.007	7.257	7.506

	7.50	7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75
	3.137	3.135	3.132	3.129	3.134	3.131	3.127	3.123	3.108	3.102
	20.50	20.50	20.51	20.53	20.56	20.62	20.72	20.90	27.35	28.22
	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	7.689	7.939	8.189	8.439	8.692	8.943	9.194	9.446	9.765	10.023

10.00	(Ref.) : 11 , 1
3.093	
30.01	
1.000	
10.290	

109 p-ETHYLBENZOIC ACID C9H1002

	-1	26.5	4.353		150.18		pHL	3.00	3.25	3.50
							RE	9.270	7.886	6.837
							t	29.32	27.41	26.12
							Z	0.323	0.381	0.441
							pHS	4.010	4.119	4.225

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.933	5.142	4.772	4.374	4.004	3.698	3.630	3.441	3.308	3.247	3.201
25.14	24.44	21.04	20.79	20.58	20.43	23.72	23.64	23.59	20.57	20.55
0.510	0.591	0.644	0.704	0.772	0.838	0.853	0.901	0.938	0.964	0.978
4.345	4.486	4.580	4.698	4.850	5.033	5.084	5.280	5.500	5.743	5.962

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.170	3.150	3.122	3.115	3.110	3.105	3.138	3.135	3.132	3.129	3.134
20.54	20.54	29.39	29.38	29.37	29.36	20.50	20.50	20.51	20.53	20.56
0.987	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.199	6.443	6.763	7.009	7.257	7.507	7.690	7.939	8.189	8.439	8.692

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
3.131	3.127	3.123	3.108	3.102	3.093	
20.62	20.72	20.90	27.35	28.22	30.01	
1.000	1.000	1.000	1.000	1.000	1.000	
8.943	9.194	9.446	9.765	10.023	10.290	

110 2-ETHYLBUTYRIC ACID C6H1206

	-1	30.2	4.734		180.16		pHL	3.00	3.25	3.50
							RE	11.701	9.808	8.383
							t	26.25	24.80	23.80
							Z	0.222	0.265	0.311
							pHS	4.169	4.271	4.367

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.143	6.033	5.257	4.746	4.237	3.778	3.639	3.346	3.114	2.948	2.869
23.04	22.47	19.45	19.28	19.13	19.01	21.85	21.79	21.76	19.12	19.11
0.366	0.436	0.505	0.561	0.631	0.710	0.737	0.804	0.866	0.923	0.949
4.473	4.596	4.715	4.811	4.936	5.090	5.150	5.314	5.509	5.773	5.963

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.811	2.773	2.736	2.724	2.716	2.711	2.733	2.730	2.728	2.725	2.728
19.10	19.10	26.81	26.80	26.80	26.79	19.06	19.06	19.07	19.09	19.11
0.968	0.981	0.991	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.183	6.420	6.734	6.974	7.221	7.469	7.661	7.909	8.159	8.409	8.661

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 12 , 7
2.726	2.723	2.720	2.710	2.706	2.700	
19.15	19.23	19.36	24.89	25.49	26.69	
1.000	1.000	1.000	1.000	1.000	1.000	
8.912	9.162	9.414	9.721	9.977	10.239	

111 ETHYLFUMARIC ACID C6H804

	-1	29.2	3.325		144.13		pHL	3.00	3.25	3.50
							RE	4.166	3.778	3.493
							t	29.05	26.66	25.05
							Z	0.665	0.735	0.797
							pHS	3.592	3.737	3.886

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.268	3.098	3.092	2.998	2.928	2.882	2.873	2.847	2.830	2.840	2.834
23.89	23.11	20.16	19.79	19.53	19.37	22.36	22.27	22.22	19.48	19.46
0.854	0.902	0.910	0.940	0.962	0.978	0.979	0.988	0.993	0.996	0.998
4.058	4.256	4.295	4.481	4.696	4.929	4.962	5.200	5.445	5.675	5.919

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.829	2.824	2.811	2.808	2.806	2.803	2.829	2.828	2.826	2.823	2.827
19.45	19.45	27.44	27.43	27.43	27.42	19.41	19.42	19.42	19.44	19.46
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.167	6.416	6.729	6.978	7.228	7.478	7.666	7.916	8.166	8.416	8.669

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.825	2.822	2.818	2.807	2.803	2.796	
19.51	19.59	19.73	25.48	26.15	27.47	
1.000	1.000	1.000	1.000	1.000	1.000	
8.919	9.170	9.422	9.732	9.989	10.252	

112 3-ETHYLGLUTARIC ACID C7H1204 160.17

-1	25.0	4.287	
-2	50.0	5.329	

pHL	3.00	3.25	3.50
RE	8.621	7.242	6.187
t	31.56	29.74	28.64
Z	0.371	0.443	0.522
pHS	3.980	4.089	4.195

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.266	4.443	3.998	3.561	3.132	2.749	2.654	2.391	2.179	2.018	1.938
28.00	27.83	24.66	25.01	25.64	26.53	30.41	31.35	32.29	29.92	30.36
0.617	0.737	0.831	0.939	1.077	1.239	1.284	1.437	1.589	1.748	1.828
4.313	4.452	4.554	4.670	4.817	4.991	5.043	5.222	5.424	5.696	5.889

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.877	1.837	1.798	1.784	1.775	1.768	1.793	1.791	1.788	1.785	1.789
30.70	30.93	41.07	41.13	41.16	41.16	31.22	31.23	31.24	31.25	31.27
1.891	1.935	1.965	1.980	1.988	1.993	1.996	1.998	1.999	1.999	2.000
6.110	6.346	6.636	6.874	7.120	7.367	7.586	7.834	8.084	8.334	8.585

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 12 , 7
1.787	1.784	1.781	1.769	1.765	1.761	
31.31	31.37	31.49	38.37	38.80	39.61	
2.000	2.000	2.000	2.000	2.000	2.000	
8.835	9.085	9.335	9.614	9.866	10.119	

113 ETHYLMALEIC ACID C6H804 144.13

-1	29.2	2.959	

pHL	3.00	3.25	3.50
RE	3.543	3.313	3.149
t	29.75	27.02	25.21
Z	0.786	0.843	0.888
pHS	3.492	3.654	3.823

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.027	2.941	2.952	2.904	2.870	2.848	2.841	2.828	2.819	2.834	2.830
23.95	23.13	20.22	19.80	19.53	19.37	22.36	22.27	22.22	19.48	19.46
0.925	0.953	0.955	0.972	0.983	0.990	0.991	0.995	0.997	0.998	0.999
4.014	4.229	4.251	4.455	4.682	4.922	4.953	5.196	5.443	5.671	5.918

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.827	2.823	2.810	2.808	2.806	2.803	2.829	2.828	2.826	2.823	2.827
19.45	19.45	27.44	27.43	27.43	27.42	19.41	19.42	19.42	19.44	19.46
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.167	6.416	6.729	6.978	7.228	7.478	7.666	7.916	8.166	8.416	8.669

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.825	2.822	2.818	2.807	2.803	2.796	
19.51	19.59	19.73	25.48	26.15	27.47	
1.000	1.000	1.000	1.000	1.000	1.000	
8.919	9.170	9.422	9.732	9.989	10.252	

114 ETHYLMALONIC ACID C5H804 132.12

-1	25.5	2.988	
-2	51.0	5.833	

pHL	3.00	3.25	3.50
RE	4.032	3.769	3.575
t	32.91	29.86	27.87
Z	0.797	0.854	0.903
pHS	3.534	3.695	3.862

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.418	3.285	3.291	3.182	3.054	2.896	2.857	2.670	2.465	2.225	2.096
26.57	25.87	22.53	22.43	22.72	23.42	27.11	28.17	29.43	27.90	28.72
0.946	0.987	0.993	1.029	1.075	1.138	1.153	1.241	1.353	1.530	1.634
4.051	4.264	4.296	4.499	4.723	4.956	5.003	5.227	5.451	5.754	5.936

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.982	1.894	1.811	1.779	1.756	1.741	1.761	1.756	1.752	1.748	1.751
29.45	30.02	40.22	40.42	40.54	40.60	30.91	30.94	30.96	30.97	31.00
1.737	1.825	1.903	1.940	1.964	1.979	1.988	1.993	1.996	1.998	1.999
6.140	6.363	6.663	6.884	7.121	7.366	7.586	7.832	8.081	8.330	8.581

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 7
1.749	1.746	1.743	1.732	1.728	1.724	
31.04	31.10	31.21	37.94	38.36	39.13	
1.999	2.000	2.000	2.000	2.000	2.000	
8.831	9.081	9.332	9.609	9.861	10.114	

115 ETHYLPROPYLMALONIC ACID C8H1404

-1	23.5	2.145	
-2	47.0	7.430	

174.20

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	3.685	3.631	3.595	3.570	3.552	3.579	3.567	3.556	3.543	3.532
t	35.92	32.01	29.48	27.79	26.72	23.10	22.56	22.22	22.05	25.83
Z	0.957	0.971	0.982	0.989	0.994	0.994	0.997	1.000	1.003	1.004
pHS	3.454	3.641	3.832	4.041	4.269	4.276	4.493	4.727	4.971	5.007

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
3.515	3.490	3.485	3.425	3.331	3.193	2.855	2.672	2.484	2.310	2.185
25.78	25.83	22.60	22.92	23.45	24.26	36.44	37.60	38.78	39.88	30.44
1.008	1.014	1.025	1.044	1.076	1.126	1.265	1.360	1.472	1.593	1.725
5.253	5.500	5.743	5.988	6.233	6.475	6.874	7.063	7.260	7.467	7.713

7.75	8.00	8.25	8.50	8.75	9.00	9.25
2.096	2.027	1.978	1.953	1.934	1.922	1.913
30.98	31.40	31.69	31.91	32.05	32.17	32.34
1.806	1.873	1.922	1.955	1.974	1.985	1.991
7.906	8.126	8.360	8.610	8.852	9.099	9.348

9.50	9.75	10.00	(Ref.) : 12 , 7	
1.896	1.889	1.883		
39.75	40.26	41.20		
1.995	1.997	1.999		
9.631	9.882	10.136		

116 ETHYLSULFONIC ACID C2H603S

-1	41.0	-2.000	

110.13

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	1.971	1.971	1.971	1.970	1.970	1.977	1.976	1.975	1.974	1.973
t	25.06	22.34	20.69	19.66	19.04	17.04	16.71	16.51	16.40	18.49
Z	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
pHS	3.219	3.435	3.653	3.882	4.121	4.124	4.357	4.600	4.847	4.866

5.00	5.25	5.50	5.75	6.00	6.25	6.50
1.972	1.971	1.978	1.977	1.976	1.975	1.971
18.43	18.39	16.47	16.46	16.45	16.45	22.05
1.000	1.000	1.000	1.000	1.000	1.000	1.000
5.113	5.363	5.598	5.847	6.096	6.346	6.637

6.75	7.00	7.25	7.50	7.75	8.00	8.25
1.970	1.969	1.968	1.978	1.978	1.977	1.975
22.05	22.04	22.04	16.42	16.42	16.43	16.44
1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.887	7.137	7.386	7.596	7.846	8.096	8.346

8.50	8.75	9.00	9.25	9.50
1.977	1.976	1.975	1.973	1.970
16.44	16.45	16.51	16.59	20.48
1.000	1.000	1.000	1.000	1.000
8.597	8.848	9.098	9.349	9.634

9.75	10.00	(Ref.) : 2 , 12	
1.968	1.966		
20.77	21.31		
1.000	1.000		
9.887	10.142		

117 FLUOROACETIC ACID C2H3F02

-1	46.0	2.584	

78.04

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	2.051	1.946	1.875	1.826	1.793	1.797	1.779	1.767	1.760	1.759
t	22.62	20.62	19.34	18.49	17.96	16.17	15.89	15.72	15.62	17.48
Z	0.849	0.896	0.931	0.956	0.974	0.975	0.985	0.991	0.995	0.995
pHS	3.296	3.481	3.672	3.882	4.110	4.128	4.348	4.585	4.829	4.846

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
1.754	1.751	1.755	1.754	1.753	1.752	1.749	1.748	1.748	1.747	1.754
17.42	17.39	15.68	15.67	15.67	15.66	20.63	20.63	20.63	20.63	15.63
0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5.092	5.340	5.579	5.827	6.076	6.326	6.609	6.859	7.109	7.359	7.576

7.75	8.00	8.25	8.50	8.75	9.00	9.25
1.753	1.753	1.752	1.753	1.752	1.751	1.750
15.64	15.64	15.65	15.66	15.68	15.71	15.77
1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.826	8.076	8.326	8.577	8.827	9.077	9.328

9.50	9.75	10.00	(Ref.) : 1
1.748	1.747	1.745	
19.20	19.42	19.83	
1.000	1.000	1.000	
9.606	9.858	10.112	

118 m-FLUOROBENZOIC ACID C7H5FO2

	-1	33.4	3.865

140.11

pHL	3.00	3.25	3.50
RE	5.181	4.502	3.993
t	25.48	23.83	22.71
Z	0.460	0.531	0.600
pHS	3.768	3.890	4.011

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.565	3.207	3.095	2.909	2.751	2.633	2.615	2.546	2.501	2.488	2.473
21.87	21.27	18.62	18.38	18.19	18.06	20.64	20.57	20.53	18.15	18.14
0.674	0.752	0.785	0.836	0.886	0.927	0.932	0.958	0.975	0.986	0.992
4.150	4.314	4.392	4.538	4.719	4.929	4.967	5.187	5.422	5.661	5.896

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.463	2.456	2.444	2.441	2.439	2.436	2.455	2.453	2.452	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13
0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.141	6.388	6.693	6.941	7.190	7.440	7.637	7.887	8.137	8.387	8.639

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 3 , 1
2.451	2.449	2.446	2.439	2.436	2.432	
18.16	18.22	18.33	23.25	23.72	24.62	
1.000	1.000	1.000	1.000	1.000	1.000	
8.889	9.140	9.391	9.691	9.945	10.204	

119 o-FLUOROBENZOIC ACID C7H5FO2

	-1	33.4	3.267

140.11

pHL	3.00	3.25	3.50
RE	3.588	3.255	3.012
t	26.53	24.42	23.00
Z	0.672	0.742	0.804
pHS	3.546	3.693	3.845

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.821	2.679	2.671	2.593	2.536	2.498	2.492	2.470	2.456	2.463	2.458
21.99	21.31	18.75	18.42	18.19	18.06	20.65	20.58	20.53	18.15	18.14
0.860	0.907	0.915	0.943	0.965	0.979	0.980	0.989	0.993	0.996	0.998
4.019	4.220	4.260	4.448	4.665	4.899	4.928	5.167	5.412	5.645	5.890

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8 00	8.25	8.50
2.454	2.451	2.441	2.440	2.438	2.436	2.454	2.453	2.451	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.138	6.387	6.691	6.940	7.190	7.440	7.637	7.887	8.137	8.387	8.639

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3 , 1
2.451	2.449	2.446	2.439	2.436	2.432	
18.16	18.22	18.33	23.25	23.72	24.62	
1.000	1.000	1.000	1.000	1.000	1.000	
8.889	9.140	9.391	9.691	9.945	10.204	

120 p-FLUOROBENZOIC ACID C7H5FO2

	-1	34.2	4.142

140.11

pHL	3.00	3.25	3.50
RE	6.264	5.362	4.684
t	24.69	23.24	22.26
Z	0.369	0.432	0.496
pHS	3 884	3.997	4 108

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.103	3.601	3.370	3.121	2.893	2.710	2.677	2.566	2.490	2.455	2.429
21.50	20.95	18.34	18.13	17.96	17.85	20.36	20.30	20.26	17.94	17.92
0.568	0.650	0.700	0.758	0.819	0.876	0.887	0.926	0.955	0.974	0.984
4.232	4.380	4.477	4.602	4.763	4.955	4.999	5.202	5.428	5.675	5.900

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.412	2.401	2.387	2.383	2.380	2.377	2.394	2 393	2.391	2.389	2.392
17.91	17.91	24.68	24.68	24.67	24.67	17.87	17.88	17.88	17.90	17.91
0.991	0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.139	6.385	6.689	6.935	7.184	7.434	7 632	7.882	8.132	8.382	8.634

8.75	9.00	9.25	9.50	9.75	10.00	(Ref) · 2 , 1
2.391	2.389	2.386	2.380	2.377	2.372	
17.95	18.00	18.11	22.89	23.33	24.18	
1.000	1.000	1.000	1 000	1.000	1.000	
8.884	9.135	9.386	9.684	9.938	10.197	

121 FORMIC ACID (S) CH2O2

-1	56.6	3.752			46.03		pHL	3.00	3.25	3.50
							RE	2.988	2.593	2.300
							t	18.60	17.73	17.12
							Z	0.464	0.536	0.605
							pHS	3.659	3.782	3.904

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.055	1.850	1.766	1.666	1.579	1.514	1.508	1.469	1.445	1.432	1.424
16.66	16.32	14.77	14.63	14.52	14.45	15.93	15.90	15.87	14.49	14.48
0.679	0.756	0.795	0.844	0.891	0.930	0.934	0.959	0.976	0.986	0.992
4.042	4.205	4.301	4.445	4.626	4.836	4.863	5.080	5.315	5.569	5.803

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.419	1.416	1.413	1.412	1.411	1.410	1.413	1.413	1.413	1.412	1.413
14.48	14.48	18.48	18.48	18.48	18.48	14.45	14.45	14.46	14.46	14.47
0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.047	6.295	6.566	6.814	7.063	7.313	7.543	7.793	8.043	8.293	8.544

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
1.413	1.412	1.412	1.411	1.410	1.409	
14.48	14.51	14.55	17.28	17.43	17.69	
1.000	1.000	1.000	1.000	1.000	1.000	
8.794	9.044	9.294	9.561	9.812	10.063	

122 FUMARIC ACID C4H4O4

-1	31.0	3.019			116.07		pHL	3.00	3.25	3.50
-2	61.2	4.384					RE	2.995	2.666	2.400
							t	30.64	28.88	28.13
							Z	0.886	1.002	1.122
							pHS	3.471	3.630	3.792

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.164	1.956	1.912	1.777	1.663	1.577	1.566	1.511	1.475	1.464	1.451
28.06	28.50	25.95	26.51	27.10	27.60	30.62	30.97	31.21	28.65	28.74
1.255	1.402	1.449	1.571	1.691	1.794	1.802	1.874	1.924	1.956	1.974
3.971	4.169	4.232	4.411	4.614	4.836	4.859	5.084	5.321	5.572	5.809

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.443	1.438	1.426	1.424	1.422	1.419	1.436	1.435	1.434	1.433	1.435
28.78	28.81	36.86	36.86	36.85	36.84	28.81	28.82	28.82	28.83	28.85
1.985	1.992	1.995	1.997	1.999	1.999	2.000	2.000	2.000	2.000	2.000
6.054	6.302	6.573	6.821	7.071	7.320	7.550	7.800	8.050	8.300	8.551

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
1.434	1.432	1.431	1.423	1.421	1.419	
28.87	28.92	29.00	34.48	34.76	35.27	
2.000	2.000	2.000	2.000	2.000	2.000	
8.801	9.051	9.301	9.568	9.819	10.070	

123 GALLIC ACID C7H6O5

-1	34.4	4.469			170.12		pHL	3.00	3.25	3.50
							RE	8.212	6.938	5.980
							t	24.23	22.94	22.05
							Z	0.278	0.330	0.384
							pHS	4.032	4.138	4.238

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.149	4.412	3.948	3.604	3.267	2.975	2.905	2.721	2.584	2.499	2.452
21.37	20.85	18.22	18.05	17.91	17.80	20.28	20.23	20.19	17.88	17.87
0.447	0.524	0.590	0.649	0.717	0.790	0.809	0.866	0.913	0.950	0.968
4.350	4.482	4.597	4.703	4.840	5.009	5.062	5.242	5.451	5.710	5.916

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.420	2.399	2.379	2.372	2.368	2.364	2.380	2.379	2.377	2.375	2.378
17.86	17.86	24.59	24.58	24.58	24.57	17.82	17.83	17.83	17.84	17.86
0.981	0.989	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000
6.146	6.387	6.692	6.936	7.183	7.432	7.632	7.881	8.131	8.381	8.632

8.75	9.00	9.25	9.50	9 75	10.00	(Ref.) · 3
2.376	2.374	2.372	2.365	2.362	2.358	
17.89	17.95	18.06	22.80	23.24	24.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.883	9.133	9.385	9.682	9.936	10.195	

124 GLUCONIC ACID C6H1207

-1	27.2	3.662	196.16

pHL	3.00	3.25	3.50
RE	5.387	4.769	4.306
t	29.92	27.63	26.07
Z	0.550	0.623	0.692
pHS	3.722	3.852	3.984

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.924	3.617	3.569	3.402	3.268	3.175	3.159	3.105	3.071	3.075	3.062
24.93	24.14	20.92	20.57	20.31	20.14	23.36	23.27	23.21	20.27	20.25
0.762	0.830	0.847	0.890	0.928	0.956	0.959	0.975	0.986	0.992	0.995
4.137	4.317	4.372	4.537	4.735	4.958	4.996	5.226	5.467	5.697	5.938

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.054	3.047	3.029	3.026	3.023	3.020	3.051	3.049	3.047	3.043	3.048
20.24	20.23	28.84	28.84	28.83	28.82	20.20	20.20	20.21	20.22	20.25
0.997	0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.185	6.433	6.750	6.999	7.249	7.498	7.683	7.933	8.183	8.433	8.686

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
3.045	3.042	3.037	3.024	3.018	3.010	
20.31	20.40	20.57	26.83	27.63	29.28	
1.000	1.000	1.000	1.000	1.000	1.000	
8.936	9.188	9.440	9.756	10.014	10.279	

125 GLUCURONIC ACID C6H1007

-1	26.7	3.677	194.14

pHL	3.00	3.25	3.50
RE	5.527	4.890	4.412
t	30.31	27.98	26.40
Z	0.546	0.619	0.689
pHS	3.731	3.860	3.992

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.017	3.700	3.650	3.477	3.338	3.241	3.224	3.168	3.132	3.137	3.124
25.24	24.43	21.15	20.79	20.53	20.36	23.64	23.55	23.49	20.49	20.47
0.759	0.827	0.845	0.888	0.926	0.955	0.958	0.975	0.985	0.991	0.995
4.144	4.323	4.378	4.543	4.741	4.963	5.001	5.232	5.472	5.702	5.943

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.115	3.108	3.089	3.086	3.083	3.079	3.112	3.110	3.107	3.104	3.109
20.46	20.45	29.23	29.22	29.21	29.20	20.41	20.42	20.42	20.44	20.47
0.997	0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.189	6.438	6.756	7.005	7.254	7.504	7.688	7.938	8.187	8.438	8.690

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 10
3.106	3.102	3.098	3.084	3.078	3.069	
20.53	20.62	20.80	27.20	28.05	29.79	
1.000	1.000	1.000	1.000	1.000	1.000	
8.941	9.192	9.444	9.762	10.020	10.287	

126 GLUTACONIC ACID C5H604

-1	28.0	3.767	130.10
-2	56.0	5.077	

pHL	3.00	3.25	3.50
RE	5.272	4.542	3.978
t	29.98	28.17	27.13
Z	0.546	0.637	0.731
pHS	3.747	3.872	3.998

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.486	3.048	2.879	2.610	2.352	2.125	2.081	1.920	1.793	1.709	1.661
26.62	26.65	23.88	24.42	25.23	26.21	29.64	30.52	31.27	28.97	29.28
0.840	0.967	1.036	1.150	1.286	1.436	1.466	1.600	1.722	1.833	1.891
4.140	4.307	4.394	4.542	4.718	4.917	4.959	5.157	5.374	5.641	5.850

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.627	1.605	1.581	1.573	1.567	1.563	1.583	1.581	1.579	1.577	1.580
29.50	29.64	38.57	38.60	38.61	38.61	29.80	29.80	29.81	29.82	29.84
1.934	1.961	1.979	1.988	1.993	1.996	1.998	1.999	1.999	2.000	2.000
6.080	6.322	6.602	6.845	7.092	7.340	7.565	7.815	8.064	8.314	8.565

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 12 , 1
1.578	1.577	1.575	1.565	1.563	1.560	
29.87	29.92	30.01	36.07	36.40	37.03	
2.000	2.000	2.000	2.000	2.000	2.000	
8.815	9.065	9.315	9.587	9.838	10.091	

127 GLUTAMIC ACID (S) C5H9NO4

1	28.9	2.155	
-1	-28.9	4.376	
-2	-49.6	9.960	

147.13

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	8.843	7.502	6.489	5.614	4.846	4.447	4.072	3.717	3.420	3.353
t	27.92	26.10	24.85	23.90	23.20	20.05	19.81	19.62	19.47	22.47
Z	0.309	0.366	0.424	0.492	0.573	0.630	0.690	0.758	0.827	0.843
pHS	4.030	4.132	4.232	4.345	4.481	4.581	4.695	4.842	5.021	5.072

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
5.264	5.481	5.728	5.944	6.180	6.423	6.738	6.984	7.232	7.481	7.675
3.169	3.038	2.971	2.926	2.895	2.875	2.850	2.842	2.836	2.828	2.850
22.40	22.35	19.59	19.58	19.57	19.57	27.65	27.66	27.68	27.71	19.65
0.893	0.932	0.961	0.976	0.986	0.992	0.997	0.999	1.001	1.004	1.006
7.924	8.174	8.424	8.693	6.180	6.423	6.738	6.984	7.232	7.481	7.675

7.75	8.00	8.25	8.50	8.75	9.00	9.25
2.839	2.821	2.792	2.748	2.675	2.571	2.438
19.75	19.93	20.24	20.80	21.63	22.84	24.43
1.012	1.021	1.036	1.066	1.111	1.180	1.278
7.924	8.174	8.424	8.693	8.938	9.182	9.421

9.50	9.75	10.00	(Ref.) · 11 , 5	
2.249	2.116	2.001		
32.87	34.99	37.27		
1.432	1.562	1.688		
9.715	9.938	10.169		

128 GLUTARIC ACID C5H8O4

-1	26.6	4.343	
-2	55.6	5.272	

132.12

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RF	8.432	7.032	5.967	5.037	4.205	3.699	3.275	2.858	2.486	2.392
t	30.12	28.53	27.59	27.07	26.96	24.09	24.45	25.04	25.85	29.39
Z	0.353	0.425	0.503	0.598	0.720	0.828	0.939	1.081	1.248	1.297
pHS	3.994	4.102	4.205	4.319	4.453	4.563	4.673	4.813	4.981	5.033

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
2.144	1.946	1.793	1.722	1.670	1.635	1.602	1.591	1.583	1.577	1.596
30.20	30.99	28.81	29.18	29.46	29.65	38.68	38.73	38.75	38.75	29.88
1.452	1.605	1.764	1.840	1.900	1.940	1.968	1.981	1.989	1.994	1.996
5.205	5.404	5.679	5.871	6.091	6.327	6.611	6.849	7.095	7.342	7.567

7.75	8.00	8.25	8.50	8.75	9.00	9.25
1.594	1.592	1.590	1.593	1.591	1.589	1.587
29.89	29.89	29.90	29.92	29.95	30.01	30.10
1.998	1.999	1.999	2.000	2.000	2.000	2.000
7.816	8.066	8.315	8.566	8.816	9.066	9.317

9.50	9.75	10.00	(Ref.) · 10 , 1	
1.578	1.575	1.572		
36.20	36.55	37.18		
2.000	2.000	2.000		
9.589	9.840	10.092		

129 GLYCERIC ACID C3H6O4

-1	36.4	3.737	

106.08

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	4.395	3.843	3.430	3.087	2.806	2.727	2.580	2.458	2.370	2.359
t	24.23	22.68	21.62	20.83	20.26	17.85	17.62	17.43	17.31	19.68
Z	0.497	0.570	0.640	0.714	0.787	0.815	0.863	0.907	0.941	0.945
pHS	3.703	3.830	3.956	4.100	4.271	4.345	4.499	4.687	4.903	4.937

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
2.307	2.274	2.266	2.255	2.247	2.242	2.233	2.231	2.229	2.227	2.242
19.62	19.58	17.40	17.38	17.38	17.37	23.72	23.71	23.71	23.71	17.34
0.967	0.980	0.989	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
5.161	5.399	5.639	5.877	6.122	6.370	6.669	6.918	7.167	7.417	7.619

7.75	8.00	8.25	8.50	8.75	9.00	9.25
2.241	2.239	2.238	2.240	2.239	2.237	2.235
17.34	17.35	17.36	17.37	17.40	17.46	17.55
1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.869	8.119	8.369	8.621	8.871	9.122	9.373

9.50	9.75	10.00	(Ref.) : 10	
2.230	2.227	2.224		
22.00	22.38	23.10		
1.000	1.000	1.000		
9.666	9.920	10.177		

130 GLYCOLIC ACID C2H4O3

-1	42.4	3.886	76.05

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	4.264	3.687	3.256
t	21.78	20.58	19.76
Z	0.437	0.506	0.574
pHS	3.747	3.867	3.985

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.892	2.585	2.463	2.309	2.175	2.072	2.059	1.998	1.958	1.940	1.927
19.13	18.67	16.59	16.41	16.26	16.16	18.18	18.12	18.09	16.23	16.22
0.649	0.728	0.768	0.821	0.873	0.917	0 923	0.951	0.971	0.983	0.990
4.119	4.278	4.370	4.509	4.684	4.890	4.924	5.139	5.372	5.620	5.852

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8 00	8.25	8.50
1.918	1.913	1.906	1.904	1.903	1.901	1.910	1.909	1.908	1.907	1.909
16.21	16.21	21.62	21.61	21.61	21.61	16.18	16.18	16.19	16.20	16.20
0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.095	6.342	6.632	6.879	7.129	7.378	7.591	7.840	8.090	8.340	8.591

8.75	9.00	9.25	9.50	9.75	10.00	(Ref) · 10 , 1
1.908	1.907	1.905	1.902	1.901	1.899	
16.23	16.27	16.34	20.09	20.36	20.85	
1.000	1.000	1.000	1.000	1.000	1.000	
8.841	9.092	9.343	9.626	9.878	10.133	

131 GLYOXYLIC ACID C2H4O4

-1	39.6	3.337	92.05

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	3.196	2.867	2.628
t	23.57	21.89	20.75
Z	0.631	0.705	0.771
pHS	3.538	3.681	3.829

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.438	2.293	2.275	2.197	2.139	2.100	2.096	2.074	2.060	2.061	2.056
19.93	19.37	17.21	16.95	16.77	16.65	18.82	18.76	18.72	16.73	16.72
0.832	0.886	0.898	0.930	0.956	0.974	0.975	0.986	0.992	0.995	0.997
3.997	4.192	4.242	4.424	4.637	4.868	4.894	5.130	5.375	5.613	5.856

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.053	2.050	2.044	2.043	2.042	2.040	2.052	2.051	2.050	2.049	2.051
16.71	16.71	22.51	22.51	22.51	22.51	16.67	16.68	16.68	16.69	16.70
0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.104	6.353	6.646	6.896	7.145	7.395	7.603	7.853	8.103	8.353	8.604

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3
2.050	2.048	2.046	2.042	2.040	2.038	
16.73	16.77	16.85	20.90	21.21	21.80	
1.000	1.000	1.000	1.000	1.000	1.000	
8.854	9.105	9.356	9.643	9.896	10.152	

132 HIPPURIC ACID C9H9NO3

-1	25.3	2.700	179.18
-2	55.1	7.271	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	3.744	3.586	3.477
t	33.47	30.10	27.88
Z	0.868	0.907	0.937
pHS	3.484	3.656	3.835

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.397	3.341	3.362	3.329	3.302	3.278	3.268	3.241	3.203	3.170	3.084
26.37	25.41	22.05	21.56	21.27	21 13	24.62	24.60	24.69	21.81	22.23
0.960	0.976	0.977	0.987	0.995	1.001	1.002	1.009	1.019	1.036	1.062
4.035	4.257	4.271	4.482	4.713	4.954	4.990	5.234	5.481	5.739	5.982

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.954	2.778	2.390	2.224	2.060	1.913	1.806	1.739	1.687	1.653	1.635
22.89	23.79	34.85	35.69	36.52	37.25	28.95	29.31	29.58	29.76	29.89
1.104	1.168	1.340	1.435	1.545	1.659	1.780	1.848	1.903	1.942	1.966
6.222	6.459	6.863	7.033	7.220	7.424	7.677	7.872	8.093	8.329	8.579

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) 10
1.622	1.614	1.608	1.596	1.592	1.588	
29.98	30.07	30.19	36.36	36.72	37.37	
1.981	1.989	1.994	1.997	1.998	1.999	
8.823	9.070	9.319	9.592	9.843	10.095	

133 HYDROBROMIC ACID HBr

	-1	81.0	-2.000		80.91		pHL	3.00	3.25	3.50
							RE	0.976	0.976	0.976
							t	17.88	16.11	15.11
							Z	1.000	1.000	1.000
							pHS	2.993	3.244	3.495

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
0.976	0.976	0.976	0.976	0.976	0.976	0.976	0.976	0.976	0.976	0.976
14.56	14.25	13.27	13.09	12.99	12.94	13.97	13.94	13.93	12.97	12.96
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.746	3.996	3.996	4.247	4.497	4.747	4.747	4.997	5.247	5.497	5.747

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
0.976	0.976	0.976	0.976	0.976	0.976	0.976	0.976	0.976	0.976	0.976
12.96	12.97	15.72	15.72	15.72	15.73	12.94	12.95	12.95	12.95	12.95
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5.997	6.247	6.496	6.746	6.996	7.246	7.497	7.747	7.997	8.247	8.497

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 2 , 12				
0.976	0.976	0.976	0.976	0.976	0.976					
12.96	12.98	13.00	14.87	14.94	15.08					
1.000	1.000	1.000	1.000	1.000	1.000					
8.747	8.997	9.247	9.496	9.746	9.996					

134 HYDROCHLORIC ACID HCl

	-1	79.1	-2.000		36.46		pHL	3.00	3.25	3.50
							RE	1.000	1.000	1.000
							t	18.06	16.26	15.25
							Z	1.000	1.000	1.000
							pHS	3.000	3.250	3.500

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
14.68	14.36	13.36	13.18	13.08	13.02	14.08	14.05	14.03	13.05	13.05
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.750	4.000	4.000	4.250	4.500	4.750	4.750	5.000	5.250	5.500	5.750

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
13.05	13.05	15.87	15.87	15.87	15.88	13.03	13.03	13.03	13.04	13.04
1.000	1.000	1.000	1 000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.000	6.250	6.500	6.750	7.000	7.250	7.500	7.750	8.000	8.250	8.500

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) 1 , 12				
1.000	1.000	1.000	1.000	1.000	1.000					
13.05	13.06	13.09	15.00	15.08	15.22					
1.000	1.000	1.000	1.000	1.000	1 000					
8.750	9.000	9.250	9.500	9.750	10.000					

135 HYDROCYANIC ACID HCN

	-1	80.9	9.400		27.03		pHL	3.00	3.25	3.50
							RE	[illegible]	[illegible]	[illegible]
							t	15.14	14.91	14.72
							Z	0.001	0.001	0.002
							pHS	6.443	6.519	6.588

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	96.567	39.822	36.911
14.55	14.40	13.27	13.24	13.22	13.19	14.18	14.17	14.16	13.23	13.23
0.002	0.002	0.004	0.004	0.005	0.005	0.007	0.008	0.010	0.023	0.025
6.663	6.749	6.950	6.997	7.059	7.138	7.237	7.300	7.381	7.772	7.805

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
33.026	28.390	11.914	11.207	10.217	8.972	4.575	4.271	3.864	3.380	2.314
13.22	13.22	15.91	15.91	15.91	15.90	13.17	13.16	13.16	13.16	13.15
0.028	0.033	0.079	0.084	0.092	0.105	0.208	0.223	0.246	0.282	0.415
7.855	7.922	8.319	8.347	8.391	8.453	8.797	8 834	8.890	8.969	9.220

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) . 2 , 4				
2.099	1.859	1.624	1.356	1.245	1.152					
13.15	13.16	13.18	15.05	15.12	15.24					
0.458	0.518	0.594	0 715	0.780	0.845					
9.295	9.398	9.530	9.761	9.910	10 093					

136 HYDROFLUORIC ACID (S) HF

-1	57.4	3.173			20.01		pHL	3.00	3.25	3.50
							RE	2.095	1.885	1.734
							t	19.19	17.99	17.19
							Z	0.657	0.732	0.797
							pHS	3.420	3.572	3.729

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.618	1.532	1.519	1.474	1.441	1.420	1.419	1.407	1.399	1.398	1.395
16.61	16.23	14.76	14.57	14.45	14.37	15.84	15.80	15.78	14.42	14.41
0.855	0.904	0.914	0.943	0.965	0.979	0.980	0.988	0.993	0.996	0.998
3.905	4.108	4.159	4.350	4.569	4.804	4.818	5.057	5.303	5.549	5.794

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.394	1.393	1.391	1.391	1.390	1.390	1.393	1.392	1.392	1.392	1.392
14.41	14.41	18.35	18.35	18.35	18.35	14.38	14.38	14.39	14.39	14.40
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.042	6.292	6.561	6.810	7.060	7.310	7.541	7.791	8.041	8.291	8.541

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 1 , 7
1.392	1.392	1.391	1.390	1.390	1.389	
14.41	14.44	14.48	17.17	17.31	17.57	
1.000	1.000	1.000	1.000	1.000	1.000	
8.792	9.042	9.292	9.558	9.809	10.060	

137 HYDROGEN AZIDE HN3

-1	72.0	4.720			43.00		pHL	3.00	3.25	3.50
							RE	5.240	4.433	3.818
							t	16.00	15.60	15.30
							Z	0.204	0.242	0.281
							pHS	4.107	4.200	4.287

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.269	2.763	2.239	2.041	1.831	1.629	1.558	1.430	1.319	1.209	1.175
15.05	14.84	13.57	13.51	13.46	13.41	14.55	14.52	14.50	13.41	13.41
0.329	0.390	0.484	0.532	0.594	0.669	0.701	0.765	0.831	0.909	0.936
4.383	4.497	4.660	4.742	4.850	4.989	5.052	5.193	5.370	5.677	5.843

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.147	1.128	1.115	1.110	1.106	1.104	1.103	1.102	1.102	1.102	1.102
13.40	13.40	16.51	16.51	16.51	16.52	13.38	13.38	13.38	13.39	13.39
0.959	0.976	0.987	0.992	0.996	0.997	0.999	0.999	1.000	1.000	1.000
6.049	6.278	6.548	6.779	7.021	7.268	7.514	7.762	8.011	8.261	8.511

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) ; 2
1.101	1.101	1.101	1.101	1.101	1.101	
13.40	13.42	13.45	15.56	15.65	15.82	
1.000	1.000	1.000	1.000	1.000	1.000	
8.761	9.011	9.261	9.516	9.766	10.016	

138 HYDROGEN HEXAFLUOROPHOSPHIDE HPF6

-1	59.0	0.000			146.00		pHL	3.00	3.25	3.50
							RE	1.353	1.352	1.352
							t	20.61	18.47	17.21
							Z	0.999	1.000	1.000
							pHS	3.094	3.328	3.562

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.352	1.351	1.353	1.353	1.353	1.352	1.352	1.352	1.351	1.353	1.353
16.47	16.05	14.69	14.45	14.31	14.24	15.67	15.63	15.60	14.28	14.27
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.802	4.048	4.049	4.292	4.539	4.787	4.795	5.044	5.294	5.538	5.787

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.353	1.353	1.352	1.352	1.351	1.351	1.353	1.353	1.353	1.353	1.353
14.27	14.27	18.10	18.10	18.10	18.10	14.24	14.25	14.25	14.26	14.26
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.037	6.287	6.555	6.804	7.054	7.304	7.537	7.787	8.037	8.287	8.538

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 2 , 12
1.353	1.353	1.352	1.352	1.351	1.350	
14.27	14.30	14.34	16.95	17.09	17.33	
1.000	1.000	1.000	1.000	1.000	1.000	
8.788	9.038	9.288	9.552	9.803	10.055	

139	HYDROGEN SULFIDE				H2S			pHL	3.00	3.25	3.50
	-1	67.4	6.960		34.08			RE	60.809	50.836	43.172
								t	16.25	15.92	15.66
								Z	0.018	0.022	0.026
								pHS	5.226	5.305	5.377

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
36.218	29.649	19.491	17.435	15.090	12.608	10.373	8.960	7.477	3.801	3.530
15.44	15.25	13.88	13.85	13.81	13.78	14.97	14.95	14.94	13.78	13.77
0.031	0.038	0.058	0.065	0.075	0.089	0.109	0.126	0.152	0.302	0.326
5.455	5.545	5.736	5.787	5.854	5.938	6.033	6.104	6.194	6.572	6.618

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.182	2.787	1.850	1.754	1.635	1.510	1.347	1.300	1.258	1.226	1.206
13.77	13.76	17.03	17.02	17.02	17.02	13.66	13.66	13.66	13.66	13.66
0.362	0.414	0.630	0.665	0.714	0 775	0.873	0.905	0.936	0.960	0.977
6.686	6.780	7.155	7.221	7.320	7.458	7.754	7.895	8.081	8.298	8.549

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 4
1.195	1.188	1.184	1.181	1.180	1.179	
13.67	13.69	13.72	15.99	16.09	16.28	
0.987	0.992	0.996	0.998	0.999	0.999	
8.782	9.025	9.272	9.529	9.778	10.029	

140	HYDROIODIC ACID				HI			pHL	3.00	3.25	3.50
	-1	79.6	-2.000		127.91			RE	0.993	0.993	0.993
								t	18.01	16.22	15.21
								Z	1.000	1.000	1.000
								pHS	2.998	3.248	3.499

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993
14.65	14.33	13.34	13.15	13.05	13.00	14.05	14.02	14.00	13.03	13.03
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.749	3.999	3.999	4.249	4.499	4.749	4.749	4.999	5.249	5.499	5.749

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993	0.993
13.02	13.03	15.83	15.83	15.83	15.84	13.00	13.01	13.01	13.02	13.01
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5.999	6.249	6.499	6.749	6.999	7.249	7.499	7.749	7.999	8.249	8.499

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 1 , 12
0.993	0.993	0.993	0.993	0.993	0.993	
13.02	13.04	13.07	14.96	15.04	15.18	
1.000	1.000	1.000	1.000	1.000	1.000	
8.749	8.999	9.249	9.499	9.749	9.999	

141	2-HYDROXY-3-CHLOROBUTYRIC A.				C4H7C103			pHL	3.00	3.25	3.50
	-1	34.4	3.092		138.55			RE	3.217	2.958	2.772
								t	26.31	24.12	22.66
								Z	0.728	0.794	0.848
								pHS	3.487	3.643	3.805

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.631	2.528	2.529	2.472	2.432	2.406	2.402	2.387	2.377	2.385	2.381
21.63	20.96	18.49	18.15	17.93	17.79	20.31	20.24	20.19	17.88	17.87
0.896	0.933	0.937	0.959	0.975	0.986	0.986	0.992	0.996	0.997	0.999
3.989	4.198	4.230	4.428	4.651	4.889	4.916	5.158	5.404	5.637	5.883

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.378	2.375	2.367	2.366	2.364	2.362	2.379	2.378	2.376	2.375	2.378
17.86	17.86	24.59	24 58	24.58	24.57	17.82	17.83	17.83	17.84	17.86
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.131	6.381	6.683	6.932	7.182	7.432	7.631	7.881	8.131	8.381	8.632

8.75	9.00	9.25	9.50	9.75	10.00	(Ref) 3
2.376	2.374	2.372	2.365	2.362	2 358	
17.89	17.95	18.06	22.80	23.24	24.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.883	9.133	9.385	9.682	9.936	10.195	

142 2-HYDROXY-3-Cl-ISOBUTYRIC A. C4H7ClO3

-1	34.4	3.208	138.55

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	3.394	3.090	2.870
t	26.11	24.02	22.61
Z	0.689	0.759	0.818
pHS	3.522	3.672	3.827

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.700	2.574	2.569	2.499	2.449	2.416	2.411	2.392	2.380	2.387	2.382
21.62	20.95	18.47	18.15	17.93	17.79	20.31	20.24	20.19	17.88	17.87
0.872	0.916	0.922	0.949	0.968	0.981	0.983	0.990	0.994	0.997	0.998
4.004	4.208	4.245	4.437	4.656	4.891	4.919	5.159	5.405	5.638	5.883

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.379	2.376	2.367	2.366	2.364	2.362	2.379	2.378	2.377	2.375	2.378
17.86	17.86	24.59	24.58	24.58	24.57	17.82	17.83	17.83	17.84	17.86
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.132	6.381	6.683	6.932	7.182	7.432	7.631	7.881	8.131	8.381	8.632

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.376	2.374	2.372	2.365	2.362	2.358	
17.89	17.95	18.06	22.80	23.24	24.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.883	9.133	9.385	9.682	9.936	10.195	

143 2-HYDROXY-3-Cl-PROPIONIC A. C3H5ClO3

-1	36.5	3.124	124.52

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	3.093	2.830	2.642
t	25.24	23.21	21.85
Z	0.712	0.780	0.837
pHS	3.484	3.638	3.798

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.497	2.392	2.390	2.332	2.291	2.264	2.261	2.245	2.235	2.241	2.237
20.90	20.26	17.94	17.63	17.42	17.29	19.66	19.59	19.55	17.37	17.36
0.887	0.927	0.932	0.956	0.973	0.984	0.985	0.991	0.995	0.997	0.998
3.980	4.188	4.222	4.419	4.641	4.878	4.904	5.145	5.391	5.625	5.871

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.235	2.232	2.225	2.224	2.222	2.221	2.235	2.234	2.233	2.231	2.234
17.35	17.35	23.68	23.67	23.67	23.66	17.32	17.32	17.33	17.34	17.35
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.119	6.369	6.667	6.916	7.166	7.416	7.619	7.869	8.119	8.369	8.620

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) . 3
2.233	2.231	2.229	2.223	2.221	2.218	
17.38	17.43	17.52	21.96	22.34	23.06	
1.000	1.000	1.000	1.000	1.000	1.000	
8.870	9.121	9.372	9.665	9.919	10.176	

144 2-HYDROXY-m-TOLUIC ACID C8H8O3

-1	31.3	3.000	152.15

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	3.376	3.138	2.969
t	28.25	25.74	24.08
Z	0.767	0.827	0.875
pHS	3.485	3.645	3.812

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.842	2.751	2.758	2.708	2.673	2.650	2.645	2.631	2.622	2.633	2.630
22.92	22.16	19.45	19.07	18.82	18.67	21.45	21.36	21.32	18.77	18.75
0.916	0.947	0.950	0.968	0.981	0.989	0.989	0.994	0.997	0.998	0.999
4.001	4.214	4.239	4.442	4.668	4.907	4.937	5.179	5.426	5.656	5.903

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.627	2.624	2.613	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.151	6.401	6.709	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

145 3-HYDROXY-o-TOLUIC ACID C8H803

-1	31.3	2.983	152.15			pHL	3.00	3.25	3.50
						RE	3.354	3.121	2.957
						t	28.28	25.76	24.08
						Z	0.772	0.831	0.879
						pHS	3.480	3.642	3.809

3.75	4.00	4.00	4.25	4 50	4.75	4.75	5.00	5.25	5.50	5.75
2.834	2.746	2.754	2.705	2.671	2.648	2.643	2.630	2.621	2.633	2.630
22.92	22.16	19.45	19.07	18.82	18.67	21.45	21.36	21.32	18.77	18.75
0.918	0.949	0.951	0.969	0.981	0.989	0.990	0.994	0.997	0.998	0.999
3.999	4.213	4.238	4.441	4.668	4.907	4.936	5.179	5.426	5.656	5.903

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.627	2.623	2.613	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.151	6.401	6.709	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

146 3-HYDROXY-p-TOLUIC ACID C8H803

-1	31.3	3.143	152.15			pHL	3.00	3.25	3.50
						RE	3.585	3.293	3.082
						t	27.99	25.61	24 02
						Z	0.721	0.786	0.842
						pHS	3.523	3.676	3.835

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.920	2.802	2.804	2.738	2.691	2.660	2.655	2.637	2.625	2.635	2.631
22.90	22.15	19.43	19.06	18.82	18.67	21.45	21.36	21.31	18.77	18.75
0.890	0.929	0.934	0.957	0.974	0.985	0.986	0.992	0.995	0.997	0.998
4.017	4.224	4.255	4.451	4.673	4.910	4.940	5.181	5.427	5.657	5.903

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.627	2.624	2.613	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.151	6.401	6.709	6.958	7 208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) 3
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

147 4-HYDROXY-m-TOLUIC ACID C8H803

-1	31.3	3.066	152.15			pHL	3.00	3.25	3.50
						RE	3.467	3.205	3.018
						t	28.13	25.68	24.05
						Z	0.746	0.809	0.861
						pHS	3.502	3.659	3.822

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.875	2.773	2.778	2.721	2.681	2.654	2.649	2.633	2.623	2.634	2.630
22.91	22.16	19.44	19.06	18.82	18.67	21.45	21.36	21.32	18.77	18.75
0.905	0.939	0.943	0.963	0.978	0.987	0.988	0.993	0.996	0.998	0.999
4.008	4.218	4.246	4.446	4.670	4.908	4.938	5.180	5.426	5.656	5.903

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.627	2.624	2.613	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.151	6.401	6.709	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) . 3
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

148 6-HYDROXY-o-TOLUIC ACID C8H803 152.15

-1 31.3 3.321

pHL	3.00	3.25	3.50							
RE	3.908	3.537	3.265							
t	27.65	25.43	23.94							
Z	0.659	0.730	0.793							
pHS	3.577	3.721	3.871							

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.051	2.888	2.879	2.790	2.724	2.680	2.672	2.647	2.631	2.639	2.633
22.87	22.14	19.40	19.05	18.81	18.67	21.45	21.36	21.31	18.77	18.75
0.851	0.900	0.908	0.938	0.962	0.977	0.979	0.988	0.993	0.996	0.998
4.042	4.240	4.280	4.466	4.681	4.914	4.945	5.183	5.428	5.659	5.904

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.628	2.625	2.613	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.152	6.401	6.709	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00
2.625	2.622	2.619	2.610	2.607	2.601
18.79	18.86	18.98	24.28	24.83	25.91
1.000	1.000	1.000	1.000	1.000	1.000
8.903	9.154	9.406	9.710	9.966	10.226

(Ref.) , 3

149 m-HYDROXYBENZOIC ACID C7H603 138.12

-1 34.0 4.082

-2 62.0 9.609

pHL	3.00	3.25	3.50							
RE	6.004	5.154	4.516							
t	24.86	23.38	22.36							
Z	0.388	0.453	0.518							
pHS	3.858	3.973	4.086							

3.75	4.00	4.00	4.25	4.50	4 75	4.75	5.00	5.25	5.50	5.75
3.971	3.503	3.303	3.068	2.856	2.689	2.661	2.559	2.491	2.462	2.439
21.59	21.03	18.40	18.19	18.02	17.90	20.43	20.37	20.33	17.99	17.98
0.592	0.673	0.719	0.776	0.835	0.889	0.898	0.934	0.960	0.977	0.986
4.213	4.364	4.457	4.587	4.752	4.948	4.991	5.198	5.426	5.671	5.899

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.423	2.413	2.398	2.393	2.386	2.377	2.385	2.365	2.332	2.280	2.191
17.97	17.98	24.81	24.83	24.87	24.94	18.19	18.39	18.73	19.29	20.29
0.992	0.996	0.999	1.001	1.004	1.008	1.014	1.025	1.043	1.075	1.135
6.140	6.386	6.691	6.938	7.187	7.436	7.648	7.897	8.146	8.395	8.680

8.75	9.00	9.25	9.50	9.75	10.00
2.084	1.955	1.821	1.674	1.583	1.513
21.47	22.89	24.42	31.18	32.51	33.81
1.213	1.317	1.443	1.600	1.715	1.812
8.914	9.145	9.374	9.646	9.866	10.098

(Ref.) · 3 , 2

150 p-HYDROXYBENZOIC ACID C7H603 138.12

-1 34.0 4.530

-2 62.0 9.310

pHL	3.00	3.25	3.50							
RE	8.759	7.385	6.353							
t	24.36	23.07	22.19							
Z	0.263	0.313	0.365							
pHS	4.062	4.166	4.265							

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.455	4.658	4.135	3.765	3.401	3.081	2.999	2.797	2.644	2.544	2.492
21.50	20.99	18.32	18.15	18.01	17.90	20.41	20.36	20.32	17.99	17.98
0.426	0.501	0.570	0.628	0.697	0.772	0.793	0.852	0.903	0.945	0.965
4.375	4.505	4.622	4.725	4.858	5.024	5.078	5.254	5.459	5.721	5.923

6.00	6.25	6 50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.455	2.430	2.404	2.393	2.381	2.364	2.361	2.324	2.266	2.181	2.046
17.98	17.99	24.84	24.88	24.96	25.11	18.46	18.84	19.44	20.35	21.85
0.979	0.989	0.997	1.002	1.008	1.016	1.028	1.049	1.085	1.140	1.243
6.151	6.391	6.700	6.942	7.189	7.438	7.661	7.909	8.155	8.400	8.689

8.75	9.00	9.25	9.50	9.75	10.00
1.921	1.793	1.677	1.567	1.505	1.462
23.22	24.65	25.98	32.39	33.38	34.37
1.350	1.475	1.606	1.740	1.828	1.893
8.908	9.129	9.355	9.620	9.847	10.085

(Ref.) · 3 , 2

151 2-HYDROXYBUTYRIC ACID C4H8O3
-1 34.3 3.979 104.11

	pHL	3.00	3.25	3.50
	RE	5.505	4.751	4.185
	t	24.86	23.33	22.29
	Z	0.420	0.488	0.556
	pHS	3.813	3.931	4.047

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.704	3.296	3.142	2.934	2.752	2.611	2.589	2.505	2.450	2.429	2.410
21.50	20.93	18.34	18.12	17.94	17.82	20.33	20.27	20.22	17.91	17.90
0.630	0.710	0.750	0.805	0.860	0.908	0.915	0.946	0.968	0.981	0.989
4.179	4.336	4.423	4.560	4.732	4.935	4.975	5.188	5.420	5.663	5.894

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.398	2.390	2.378	2.375	2.372	2.370	2.387	2.385	2.384	2.382	2.385
17.89	17.88	24.63	24.63	24.63	24.62	17.85	17.85	17.86	17.87	17.89
0.994	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.136	6.383	6.686	6.934	7.183	7.433	7.632	7.881	8.131	8.381	8.633

8.75	9.00	9.25	9.50	9.75	10.00
2.383	2.381	2.379	2.372	2.369	2.366
17.92	17.98	18.08	22.85	23.29	24.13
1.000	1.000	1.000	1.000	1.000	1.000
8.883	9.134	9.385	9.683	9.937	10.196

(Ref.) : 11 , 3

152 3-HYDROXYBUTYRIC ACID C4H8O3
-1 34.3 4.519 104.11

	pHL	3.00	3.25	3.50
	RE	8.608	7.260	6.247
	t	24.23	22.95	22.07
	Z	0.266	0.316	0.368
	pHS	4.056	4.160	4.260

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.367	4.585	4.074	3.711	3.354	3.041	2.962	2.765	2.615	2.518	2.468
21.39	20.88	18.24	18.07	17.93	17.82	20.31	20.26	20.22	17.91	17.90
0.430	0.505	0.573	0.631	0.700	0.775	0.795	0.854	0.904	0.945	0.965
4.370	4.500	4.617	4.720	4.854	5.020	5.074	5.250	5.456	5.718	5.920

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.433	2.410	2.388	2.381	2.376	2.372	2.388	2.386	2.384	2.382	2.385
17.89	17.88	24.63	24.63	24.62	24.62	17.85	17.85	17.86	17.87	17.89
0.979	0.988	0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000
6.148	6.389	6.694	6.937	7.184	7.433	7.632	7.882	8.131	8.381	8.633

8.75	9.00	9.25	9.50	9.75	10.00
2.383	2.381	2.379	2.372	2.369	2.366
17.92	17.98	18.08	22.85	23.29	24.13
1.000	1.000	1.000	1.000	1.000	1.000
8.883	9.134	9.385	9.683	9.937	10.196

(Ref.) : 11 , 3

153 4-HYDROXYBUTYRIC ACID C4H8O3
-1 34.3 4.721 104.11

	pHL	3.00	3.25	3.50
	RE	10.360	8.687	7.430
	t	24.06	22.85	22.01
	Z	0.220	0.263	0.308
	pHS	4.151	4.252	4.347

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.334	5.350	4.614	4.173	3.729	3.325	3.202	2.943	2.737	2.581	2.512
21.36	20.87	18.21	18.06	17.93	17.82	20.30	20.25	20.22	17.91	17.90
0.362	0.431	0.504	0.559	0.627	0.706	0.734	0.800	0.862	0.921	0.947
4.452	4.574	4.700	4.794	4.916	5.068	5.128	5.289	5.481	5.752	5.939

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.460	2.426	2.396	2.385	2.378	2.373	2.389	2.387	2.385	2.382	2.385
17.89	17.89	24.63	24.63	24.62	24.62	17.85	17.85	17.86	17.87	17.89
0.968	0.981	0.990	0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.157	6.393	6.700	6.939	7.185	7.434	7.633	7.882	8.131	8.381	8.633

8.75	9.00	9.25	9.50	9.75	10.00
2.384	2.381	2.379	2.372	2.369	2.366
17.92	17.98	18.08	22.85	23.29	24.13
1.000	1.000	1.000	1.000	1.000	1.000
8.883	9.134	9.385	9.683	9.937	10.196

(Ref.) : 11 , 3

154 m-HYDROXYCINNAMIC ACID C9H8O3

	-1	27.0	4.397		164.16		pHL	3.00	3.25	3.50
							RE	9.479	8.045	6.961
							t	28.86	27.02	25.77
							Z	0.309	0.366	0.424
							pHS	4.027	4.135	4.240

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.025	5.203	4.795	4.386	4.001	3.680	3.606	3.407	3.265	3.195	3.146
24.83	24.14	20.80	20.56	20.36	20.22	23.43	23.36	23.31	20.35	20.34
0.492	0.572	0.627	0.688	0.757	0.825	0.841	0.892	0.932	0.960	0.975
4.358	4.496	4.593	4.709	4.857	5.037	5.088	5.281	5.498	5.744	5.960

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.112	3.091	3.062	3.055	3.050	3.045	3.076	3.074	3.071	3.067	3.072
20.32	20.32	28.99	28.99	28.98	28.97	20.28	20.28	20.29	20.31	20.34
0.986	0.992	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.196	6.439	6.758	7.004	7.252	7.501	7.686	7.935	8.185	8.435	8.688

8.75	9.00	9.25	9.50	9.75	10.00	(Ref) : 11 , 1
3.069	3.066	3.061	3.048	3.042	3.034	
20.39	20.49	20.66	26.97	27.80	29.48	
1.000	1.000	1.000	1.000	1.000	1.000	
8.938	9.189	9.442	9.758	10.016	10.282	

155 o-HYDROXYCINNAMIC ACID C9H8O3

	-1	27.0	4.613		164.16		pHL	3.00	3.25	3.50
							RE	11.491	9.674	8.302
							t	28.60	26.85	25.66
							Z	0.254	0.302	0.354
							pHS	4.125	4.229	4.329

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.110	6.052	5.420	4.911	4.416	3.983	3.867	3.592	3.386	3.261	3.189
24.76	24.10	20.74	20.52	20.34	20.21	23.41	23.35	23.30	20.35	20.33
0.415	0.489	0.552	0.611	0.683	0.759	0.782	0.844	0.897	0.940	0.961
4.440	4.569	4.676	4.780	4.914	5.079	5.136	5.313	5.518	5.772	5.974

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.139	3.106	3.070	3.060	3.052	3.046	3.077	3.074	3.071	3.067	3.072
20.32	20.32	28.99	28.99	28.98	28.97	20.28	20.28	20.29	20.31	20.34
0.977	0.987	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000
6.202	6.442	6.762	7.005	7.252	7.501	7.686	7.935	8.185	8.435	8.688

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 11 , 1
3.069	3.066	3.061	3.048	3.042	3.034	
20.39	20.49	20.66	26.97	27.80	29.48	
1.000	1.000	1.000	1.000	1.000	1.000	
8.938	9.189	9.442	9.758	10.016	10.282	

156 p-HYDROXYCINNAMIC ACID C9H8O3

	-1	27.0	4.678		164.16		pHL	3 00	3.25	3.50
							RE	12.202	10.251	8.777
							t	28.53	26.80	25.63
							Z	0.239	0.285	0.334
							pHS	4.156	4.259	4.357

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.496	6.356	5.642	5.100	4.567	4.096	3.963	3.663	3.434	3.286	3.206
24.74	24.09	20.72	20.52	20.34	20.21	23.41	23.34	23.30	20.35	20.33
0.393	0.465	0.530	0.588	0.659	0.737	0.762	0.827	0.884	0.932	0.956
4.465	4.592	4.702	4.803	4.934	5.094	5.153	5.324	5.526	5.782	5.979

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.149	3.112	3.073	3.061	3.053	3.047	3.077	3.074	3.071	3.067	3.072
20.32	20.32	28.99	28.99	28.98	28.97	20.28	20.28	20.29	20.31	20.34
0.973	0.984	0.992	0.996	0.998	0.999	0.999	0.999	1.000	1.000	1.000
6.205	6.444	6.763	7.006	7.253	7.501	7.686	7.935	8.185	8.435	8.688

8.75	9.00	9.25	9 50	9.75	10.00	(Ref.) . 11 , 7
3.069	3.066	3.061	3.048	3.042	3.034	
20.39	20.49	20.66	26.97	27.80	29.48	
1.000	1.000	1.000	1.000	1.000	1.000	
8.938	9.189	9.442	9 758	10.016	10.282	

157 2-HYDROXYISOBUTYRIC ACID (S) C4H8O3

-1	33.5	3.971	104.11

	pHL	3.00	3.25	3.50
	RE	5.585	4.824	4.252
	t	25.27	23.69	22.62
	Z	0.424	0.493	0.561
	pHS	3.812	3.931	4.048

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.767	3.356	3.206	2.996	2.812	2.671	2.648	2.564	2.509	2.489	2.470
21.81	21.22	18.57	18.34	18.16	18.03	20.61	20.54	20.49	18.12	18.11
0.635	0.715	0.754	0.809	0.863	0.910	0.917	0.948	0.969	0.982	0.989
4.180	4.338	4.423	4.561	4.735	4.939	4.978	5.193	5.425	5.666	5.898

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.458	2.450	2.437	2.434	2.432	2.429	2.447	2.446	2.444	2.442	2.445
18.10	18.10	25.02	25.01	25.01	25.00	18.06	18.06	18.07	18.08	18.10
0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.141	6.388	6.693	6.940	7.190	7.439	7.637	7.886	8.136	8.386	8.638

8.75	9.00	9.25	9.50	9.75	10.00
2.443	2.441	2.438	2.432	2.428	2.424
18.13	18.20	18.30	23.20	23.67	24.56
1.000	1.000	1.000	1.000	1.000	1.000
8.888	9.139	9.390	9.690	9.944	10.203

(Ref.) : 11 , 4

158 p-HYDROXYPHENYLACETIC ACID C8H8O3

-1	26.9	3.171	152.15

	pHL	3.00	3.25	3.50
	RE	4.162	3.835	3.597
	t	31.17	28.40	26.55
	Z	0.727	0.791	0.845
	pHS	3.566	3.718	3.876

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.414	3.279	3.287	3.212	3.158	3.122	3.113	3.092	3.078	3.094	3.089
25.23	24.36	21.17	20.74	20.45	20.27	23.54	23.44	23.38	20.40	20.38
0.892	0.930	0.935	0.957	0.974	0.985	0.986	0.992	0.995	0.997	0.998
4.056	4.263	4.292	4.487	4.708	4.944	4.979	5.219	5.465	5.692	5.938

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.084	3.080	3.063	3.061	3.058	3.055	3.087	3.085	3.082	3.079	3.084
20.37	20.36	29.07	29.06	29.06	29.05	20.32	20.33	20.34	20.35	20.38
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.186	6.435	6.753	7.002	7.252	7.502	7.686	7.936	8.186	8.436	8.688

8.75	9.00	9.25	9.50	9.75	10.00
3.081	3.078	3.073	3.060	3.054	3.045
20.44	20.53	20.71	27.05	27.88	29.58
1.000	1.000	1.000	1.000	1.000	1.000
8.939	9.190	9.443	9.759	10.018	10.284

(Ref.) · 11 , 2

159 HYDROXYTRIMETHYLACETIC ACID C5H10O3

-1	31.3	4.863	118.13

	pHL	3.00	3.25	3.50
	RE	12.834	10.722	9.134
	t	25.50	24.16	23.23
	Z	0.194	0.233	0.274
	pHS	4.227	4.327	4.420

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.749	6.503	5.543	4.986	4.422	3.902	3.727	3.393	3.119	2.898	2.806
22.52	21.98	19.06	18.91	18.77	18.66	21.38	21.33	21.30	18.76	18.75
0.324	0.388	0.460	0.513	0.580	0.660	0.692	0.762	0.831	0.903	0.933
4.522	4.641	4.767	4.857	4.974	5.120	5.183	5.336	5.521	5.794	5.971

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.735	2.687	2.643	2.629	2.619	2.612	2.632	2.630	2.627	2.624	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.958	0.975	0.988	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
6.184	6.416	6.729	6.966	7.211	7.459	7.653	7.902	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00
2.625	2.622	2.619	2.611	2.607	2.601
18.79	18.86	18.98	24.28	24.83	25.91
1.000	1.000	1.000	1.000	1.000	1.000
8.903	9.154	9.406	9.710	9.966	10.226

(Ref.) . 3

160 2-HYDROXYVALERIC ACID C5H1003 pHL 3.00 3.25 3.50
-1 32.3 3.886 118.13 RE 5.414 4.702 4.168
t 26.05 24.34 23.18
Z 0.455 0.526 0.595
pHS 3.782 3.903 4.024

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.717	3.340	3.222	3.026	2.858	2.733	2.714	2.640	2.592	2.579	2.562
22.31	21.69	18.95	18.69	18.50	18.36	21.04	20.97	20.93	18.46	18.45
0.669	0.748	0.781	0.833	0.883	0.925	0.930	0.957	0.974	0.985	0.991
4.161	4.325	4.403	4.548	4.728	4.937	4.976	5.195	5.430	5.669	5.904
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.551	2.544	2.531	2.528	2.526	2.523	2.543	2.542	2.540	2.537	2.541
18.44	18.44	25.62	25.62	25.61	25.61	18.40	18.40	18.41	18.42	18.44
0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.148	6.395	6.702	6.950	7.199	7.449	7.644	7.894	8.144	8.394	8.646
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3				
2.539	2.537	2.534	2.526	2.523	2.518					
18.48	18.54	18.66	23.77	24.28	25.27					
1.000	1.000	1.000	1.000	1.000	1.000					
8.896	9.147	9.399	9.701	9.956	10.215					

161 4-HYDROXYVALERIC ACID C5H1003 pHL 3.00 3.25 3.50
-1 32.3 4.699 118.13 RE 10.690 8.968 7.674
t 25.08 23.75 22.83
Z 0.227 0.271 0.317
pHS 4.146 4.248 4.344

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.547	5.538	4.819	4.359	3.899	3.484	3.362	3.097	2.888	2.737	2.667
22.13	21.60	18.78	18.62	18.47	18.36	21.01	20.95	20.92	18.46	18.45
0.373	0.443	0.514	0.570	0.639	0.718	0.744	0.810	0.870	0.926	0.951
4.450	4.574	4.695	4.791	4.916	5.071	5.130	5.294	5.490	5.757	5.947
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.615	2.581	2.549	2.539	2.532	2.526	2.545	2.543	2.540	2.538	2.541
18.44	18.44	25.62	25.62	25.61	25.61	18.40	18.40	18.41	18.42	18.44
0.970	0.982	0.991	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.168	6.405	6.715	6.955	7.202	7.450	7.646	7.895	8.144	8.394	8.646
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3				
2.539	2.537	2.534	2.526	2.523	2.518					
18.48	18.54	18.66	23.77	24.28	25.27					
1.000	1.000	1.000	1.000	1.000	1.000					
8.896	9.147	9.399	9.701	9.956	10.215					

162 HYPOPHOSPHOROUS ACID (S) H3P02 pHL 3.00 3.25 3.50
-1 45.2 1.230 66.00 RE 1.798 1.791 1.787
t 23.64 21.13 19.61
Z 0.990 0.994 0.996
pHS 3.192 3.409 3.629

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.784	1.782	1.787	1.786	1.785	1.784	1.783	1.782	1.781	1.786	1.786
18.68	18.12	16.32	16.01	15.83	15.73	17.62	17.57	17.54	15.79	15.78
0.998	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.860	4.100	4.104	4.339	4.582	4.829	4.845	5.093	5.343	5.580	5.829
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.785	1.784	1.781	1.780	1.780	1.779	1.786	1.786	1.785	1.784	1.785
15.78	15.78	20.83	20.83	20.83	20.83	15.75	15.75	15.76	15.76	15.77
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.079	6.329	6.613	6.863	7.113	7.363	7.579	7.829	8.079	8.329	8.580
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 4				
1.785	1.784	1.783	1.780	1.779	1.777					
15.79	15.83	15.89	19.38	19.62	20.04					
1.000	1.000	1.000	1.000	1.000	1.000					
8.830	9.080	9.331	9.610	9.862	10.116					

163	IODIC ACID				HIO2			pHL	3.00	3.25	3.50
	-1	42.0	0.770		159.91			RE	1.928	1.926	1.924
								t	24.69	22.03	20.41
								Z	0.997	0.998	0.999
								pHS	3.213	3.429	3.647
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75	
1.923	1.922	1.928	1.928	1.927	1.925	1.924	1.923	1.922	1.929	1.928	
19.41	18.81	16.86	16.53	16.34	16.22	18.27	18.21	18.17	16.29	16.28	
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
3.876	4.116	4.119	4.352	4.595	4.842	4.861	5.108	5.358	5.593	5.842	
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	
1.927	1.926	1.922	1.921	1.920	1.919	1.929	1.928	1.927	1.926	1.928	
16.28	16.28	21.74	21.74	21.73	21.73	16.24	16.25	16.25	16.26	16.27	
1.000	1.000	1.000	1.000	1.000	1 000	1.000	1.000	1.000	1.000	1.000	
6.092	6.342	6.631	6.881	7.130	7.380	7.592	7.842	8.092	8.342	8.593	
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 1 , 4					
1.927	1.926	1.924	1.921	1.920	1.917						
16.29	16.33	16.41	20.20	20.47	20.98						
1.000	1.000	1.000	1.000	1.000	1.000						
8.843	9.094	9.344	9 628	9.881	10.136						

164	IODOACETIC ACID				C2H3IO2			pHL	3.00	3.25	3.50
	-1	42.1	3.174		185 95			RE	2.782	2.524	2.338
								t	22.95	21.25	20.11
								Z	0.682	0.753	0.814
								pHS	3.471	3.623	3.780
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75	
2.195	2.089	2.081	2.024	1.982	1.956	1.953	1.938	1.928	1 930	1.927	
19.31	18.77	16.76	16.49	16.32	16.21	18.25	18.19	18.15	16.28	16.27	
0.869	0.914	0.921	0.948	0.968	0.981	0.982	0.990	0.994	0.997	0.998	
3.959	4.163	4.204	4.397	4.617	4.853	4.875	5 115	5.360	5.599	5.844	
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	
1.924	1.922	1.918	1.917	1.916	1.915	1.924	1.923	1.923	1.921	1.923	
16.26	16.26	21.71	21.70	21.70	21.70	16.23	16.23	16.24	16.25	16.25	
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
6.092	6.342	6.631	6 880	7.130	7.380	7.591	7.841	8.091	8.342	8.593	
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 1					
1.922	1.921	1.920	1.916	1.915	1.913						
16.28	16.32	16.39	20.17	20.44	20.95						
1.000	1.000	1.000	1.000	1.000	1.000						
8.843	9.093	9 344	9.628	9.880	10.135						

165	m-IODOBENZOIC ACID				C7H5IO2			pHL	3.00	3.25	3.50
	-1	33.4	3.851		248.02			RE	5.129	4.461	3.960
								t	25.50	23.85	22.72
								Z	0.465	0.536	0.605
								pHS	3.762	3.885	4.007
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75	
3.539	3.188	3.080	2.898	2.742	2.627	2.610	2.542	2.499	2.487	2.472	
21.87	21.27	18.63	18.38	18.19	18.06	20.64	20.57	20.53	18.15	18.14	
0.679	0.757	0.789	0.840	0.889	0.929	0.934	0.959	0.976	0.986	0.992	
4.146	4.311	4.388	4.535	4.717	4.928	4.965	5.186	5.422	5.661	5.896	
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	
2.462	2.455	2.444	2.441	2.439	2.436	2.455	2.453	2.452	2.450	2.453	
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13	
0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
6.141	6.388	6.693	6.941	7.190	7.440	7.637	7.887	8.137	8.387	8.639	
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 3 , 1					
2.451	2.449	2.446	2.439	2.436	2.432						
18.16	18.22	18.33	23.25	23.72	24.62						
1.000	1.000	1.000	1.000	1.000	1.000						
8.889	9.140	9.391	9.691	9.945	10.204						

166 o-IODOBENZOIC ACID C7H5IO2

	-1	33.4	2.863		248.02		pHL	3.00	3.25	3.50
							RE	3.023	2.835	2.703
							t	27.24	24.78	23.16
							Z	0.802	0.856	0.899
							pHS	3.436	3.603	3.778
3.75	4.00	4.00	4.25	4 50	4.75	4.75	5.00	5.25	5.50	5.75
2.607	2.540	2.548	2.510	2.485	2.468	2.464	2.454	2.447	2.458	2.455
22.04	21.32	18.80	18.43	18.20	18.06	20.66	20.58	20.53	18.15	18.14
0.933	0.959	0.961	0.975	0.985	0.992	0 992	0.995	0.997	0.998	0.999
3.973	4.191	4.213	4.421	4.651	4.892	4 919	5.163	5.410	5.641	5.888
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.452	2.450	2.441	2.440	2.438	2.436	2.454	2.453	2.451	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.137	6.387	6.691	6.940	7.190	7.440	7.637	7.887	8.137	8.387	8.639
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.)	3 , 1			
2.451	2.449	2.446	2.439	2.436	2.432					
18.16	18.22	18.33	23.25	23.72	24.62					
1.000	1.000	1.000	1.000	1.000	1.000					
8.889	9.140	9.391	9.691	9.945	10.204					

167 p-IODOBENZOIC ACID C7H5IO2

	-1	33.4	3.930		248.02		pHL	3.00	3.25	3 50
							RE	5.432	4.702	4.155
							t	25.38	23.78	22.68
							Z	0.438	0.507	0.576
							pHS	3.795	3.915	4.034
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3,692	3,301	3,166	2,966	2,792	2,660	2,640	2,561	2,510	2,493	2,476
21.85	21.26	18,61	18.37	18,18	18,06	20.64	20,57	20,53	18,15	18,14
0.650	0.730	0.766	0.820	0.872	0.917	0.923	0.952	0.971	0.983	0.990
4.169	4.329	4.411	4.552	4 729	4.935	4.974	5.191	5.424	5.665	5.898
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.464	2.457	2.444	2.441	2 439	2.436	2.455	2.453	2.452	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18 10	18.11	18.13
0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.141	6.389	6.693	6.941	7.190	7 440	7.637	7.887	8.137	8.387	8.639
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3 , 1				
2.451	2.449	2.446	2.439	2.436	2.432					
18.16	18.22	18.33	23.25	23.72	24.62					
1.000	1.000	1.000	1.000	1.000	1.000					
8.889	9.140	9.391	9.691	9.945	10.204					

168 4-IODOBUTYRIC ACID C4H7IO2

	-1	34.4	4.638		214.00		pHL	3.00	3.25	3.50
							RE	9.566	8.039	6.892
							t	24.08	22.85	22.00
							Z	0.238	0.283	0.332
							pHS	4.111	4.214	4.310
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5,893	5,000	4,364	3,958	3,553	3,189	3,086	2,855	2,674	2,545	2,484
21,34	20,84	18,19	18,04	17,90	17,80	20,28	20,22	20,19	17 88	17,87
0.389	0.460	0.532	0.588	0.658	0.735	0,760	0.823	0.881	0.932	0.955
4.417	4.542	4.665	4.763	4.889	5.047	5.104	5.271	5.469	5.737	5.930
6.00	6.25	6.50	6 75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2,440	2,411	2,385	2,376	2,370	2,365	2,381	2,379	2,377	2,375	2,378
17,86	17,86	24,59	24,58	24,58	24,57	17,82	17,83	17,83	17,84	17,86
0,973	0,984	0,992	0,995	0,997	0,999	0,999	0,999	1,000	1,000	1,000
6,153	6,391	6,696	6,938	7,184	7,433	7,632	7 881	8,131	8,381	8,632
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3				
2,376	2,374	2,372	2,365	2,362	2,358					
17,89	17,95	18,06	22,80	23,24	24,08					
1.000	1.000	1.000	1.000	1 000	1.000					
8,883	9,133	9,385	9,682	9,936	10,195					

169 m-IODOPHENYLACETIC ACID C8H7IO2

	-1	34.3	4.159

262.05

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	6.334	5.418	4.729
t	24.62	23.19	22.21
Z	0.364	0.426	0.490
pHS	3.891	4.004	4.114

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.138	3.627	3.386	3.133	2.901	2.713	2.679	2.565	2.486	2.450	2.423
21.46	20.92	18.30	18.10	17.94	17.82	20.33	20.26	20.22	17.91	17.90
0.562	0.643	0.694	0.752	0.814	0.872	0.883	0.923	0.953	0.973	0.984
4.238	4.384	4.482	4.607	4.766	4.957	5.001	5.203	5.428	5.676	5.900

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.405	2.394	2.380	2.376	2.373	2.370	2.387	2.386	2.384	2.382	2.385
17.89	17.88	24.63	24.63	24.63	24.62	17.85	17.85	17.86	17.87	17.89
0.991	0.995	0.997	0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.139	6.384	6.688	6.935	7.183	7.433	7.632	7.881	8.131	8.381	8.633

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.)	,	2	,	1
2.383	2.381	2.379	2.372	2.369	2.366					
17.92	17.98	18.08	22.85	23.29	24.13					
1.000	1.000	1.000	1.000	1.000	1.000					
8.883	9.134	9.385	9.683	9.937	10.196					

170 o-IODOPHENYLACETIC ACID C8H7IO2

	-1	34.3	4.038

262.05

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	5.758	4.954	4.350
t	24.77	23.28	22.26
Z	0.401	0.467	0.534
pHS	3.838	3.954	4.069

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.835	3.395	3.216	2.994	2.796	2.641	2.616	2.522	2.460	2.435	2.414
21.49	20.93	18.33	18.12	17.94	17.82	20.33	20.27	20.22	17.91	17.90
0.608	0.689	0.733	0.789	0.846	0.897	0.905	0.940	0.964	0.979	0.987
4.198	4.351	4.442	4.575	4.742	4.942	4.983	5.193	5.422	5.666	5.896

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.400	2.391	2.378	2.375	2.373	2.370	2.387	2.386	2.384	2.382	2.385
17.89	17.88	24.63	24.63	24.63	24.62	17.85	17.85	17.86	17.87	17.89
0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.137	6.384	6.687	6.934	7.183	7.433	7.632	7.881	8.131	8.381	8.633

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.)		2	,	1
2.383	2.381	2.379	2.372	2.369	2.366					
17.92	17.98	18.08	22.85	23.29	24.13					
1.000	1.000	1.000	1.000	1.000	1.000					
8.883	9.134	9.385	9.683	9.937	10.196					

171 p-IODOPHENYLACETIC ACID C8H7IO2

	-1	34.3	4.178

262.05

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	6.432	5.497	4.793
t	24.59	23.17	22.20
Z	0.358	0.420	0.483
pHS	3.900	4.012	4.121

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.190	3.666	3.415	3.157	2.919	2.726	2.690	2.572	2.491	2.452	2.425
21.46	20.92	18.30	18.10	17.94	17.82	20.33	20.26	20.22	17.91	17.90
0.555	0.636	0.688	0.746	0.809	0.868	0.879	0.921	0.951	0.972	0.983
4.244	4.390	4.489	4.612	4.770	4.959	5.004	5.205	5.429	5.677	5.900

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.406	2.395	2.380	2.376	2.373	2.370	2.387	2.386	2.384	2.382	2.385
17.89	17.88	24.63	24.63	24.63	24.62	17.85	17.85	17.86	17.87	17.89
0.990	0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.139	6.385	6.688	6.935	7.183	7.433	7.632	7.881	8.131	8.381	8.633

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.)	,	2	,	1
2.383	2.381	2.379	2.372	2.369	2.366					
17.92	17.98	18.08	22.85	23.29	24.13					
1.000	1.000	1.000	1.000	1.000	1.000					
8.883	9.134	9.385	9.683	9.937	10.196					

172 3-IODOPROPIONIC ACID C3H5IO2

	-1	36.5	4.056		199.98		pHL	3.00	3.25	3.50
							RE	5.531	4.750	4.164
							t	23.74	22.38	21.44
							Z	0.391	0.457	0.523
							pHS	3.839	3.954	4.067

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.665	3.236	3.048	2.834	2.642	2.490	2.465	2.373	2.311	2.284	2.263
20.73	20.21	17.76	17.57	17.41	17.29	19.65	19.58	19.55	17.37	17.36
0.596	0.677	0.724	0.780	0.839	0.891	0 900	0.936	0.961	0.978	0.987
4.194	4.345	4.441	4.571	4.736	4.933	4.974	5.181	5.410	5.656	5.884

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.249	2.241	2.229	2.226	2.224	2.221	2.236	2.235	2.233	2.231	2.234
17.36	17.35	23.68	23.67	23.67	23.66	17.32	17.32	17.33	17.34	17.35
0.992	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.125	6.371	6.671	6.918	7.167	7.416	7.619	7.869	8.119	8.369	8.620

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.233	2.231	2.229	2.223	2.221	2.218	
17.38	17.43	17.52	21.96	22.34	23.06	
1.000	1.000	1.000	1.000	1.000	1 000	
8.870	9.121	9.372	9.665	9.919	10.176	

173 5-IODOVALERIC ACID C5H9IO2

	-1	32.3	4.770		228.03		pHL	3.00	3.25	3.50
							RE	11.429	9.570	8.173
							t	25.02	23.71	22.81
							Z	0 212	0.253	0.297
							pHS	4.180	4.280	4.375

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.955	5.862	5.048	4.556	4.059	3.607	3.465	3.175	2.943	2.765	2.686
22.12	21.59	18.77	18.61	18.47	18.36	21.00	20.95	20.92	18.46	18.45
0.351	0.418	0.490	0.544	0.613	0.692	0.721	0.789	0.853	0.916	0.943
4.479	4.601	4.725	4.818	4.939	5.090	5.150	5.309	5.500	5.771	5.955

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.627	2.588	2.553	2.541	2.533	2.527	2.546	2.543	2.541	2.538	2.541
18.44	18.44	25.62	25.62	25.61	25.61	18.40	18.40	18.41	18.42	18.44
0.965	0.979	0.990	0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.172	6.407	6.717	6.956	7.202	7.450	7.646	7.895	8.144	8.394	8.646

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 3
2.539	2.537	2.534	2.526	2.523	2.518	
18.48	18.54	18.66	23.77	24.28	25.27	
1.000	1.000	1.000	1.000	1.000	1.000	
8.896	9.147	9.399	9.701	9.956	10.215	

174 ISOBUTYRIC ACID C4H8O2

	-1	34.4	4.860		88.11		pHL	3.00	3.25	3.50
							RE	11.795	9.857	8.402
							t	23.92	22.74	21.93
							Z	0.192	0.230	0.271
							pHS	4.217	4.316	4.409

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.130	5.984	5.054	4.552	4.040	3.564	3.401	3.095	2.842	2.629	2.545
21.30	20.82	18.16	18.02	17.90	17.80	20.27	20.22	20.19	17.88	17.87
0.320	0.383	0.458	0.509	0.576	0.655	0.687	0.757	0.826	0.901	0.931
4.510	4.628	4.759	4.847	4.962	5.106	5.169	5.320	5.502	5.781	5.955

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.479	2.435	2.396	2.383	2.374	2.367	2.382	2.380	2.378	2.375	2.378
17.86	17.86	24.59	24.58	24.58	24.57	17.82	17.83	17.83	17.84	17.86
0.957	0.974	0.987	0.992	0.996	0.998	0.998	0.999	1.000	1.000	1.000
6.166	6.397	6.705	6.941	7.186	7.433	7.633	7.882	8.131	8.381	8.632

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 7
2.376	2.374	2.372	2.365	2.362	2.358	
17.89	17.95	18.06	22.80	23.24	24.08	
1.000	1.000	1.000	1.000	1.000	1.000	
8.883	9.133	9.385	9.682	9.936	10.195	

175 ISOCAPROIC ACID C6H1202

-1	30.3	4.845	116.16	

	3.00	3.25	3.50
pHL			
RE	12.968	10.838	9.236
t	26.10	24.69	23.72
Z	0.199	0.238	0.281
pHS	4.222	4.322	4.416

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.839	6.585	5.646	5.080	4.508	3.984	3.812	3.475	3.202	2.987	2.895
22.97	22.41	19.40	19.24	19.09	18.98	21.80	21.75	21.71	19.09	19.08
0.332	0.397	0.467	0.521	0.589	0.669	0.700	0.770	0.838	0.906	0.936
4.519	4.639	4.761	4.853	4.972	5.119	5.182	5.337	5.524	5.795	5.975

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.824	2.777	2.733	2.719	2.709	2.702	2.724	2.721	2.718	2.715	2.719
19.07	19.06	26.75	26.74	26.74	26.73	19.03	19.03	19.04	19.05	19.07
0.960	0.976	0.988	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
6.189	6.422	6.737	6.975	7.220	7.468	7.660	7.909	8.158	8.408	8.660

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.717	2.714	2.710	2.701	2.697	2.691	
19.12	19.19	19.32	24.83	25.43	26.62	
1.000	1.000	1.000	1.000	1.000	1.000	
8.911	9.162	9.413	9.720	9.976	10.238	

176 ISOCITRIC ACID C6H807

-1	29.0	3.250	192.13
-2	55.0	4.720	
-3	74.0	6.380	

	3.00	3.25	3.50
pHL			
RE	3.728	3.316	2.989
t	30.79	28.83	27.84
Z	0.761	0.862	0.965
pHS	3.559	3.707	3.858

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.698	2.432	2.364	2.178	2.004	1.854	1.831	1.722	1.632	1.563	1.505
27.59	28.03	25.33	26.16	27.21	28.38	31.88	33.07	34.38	33.02	34.56
1.082	1.218	1.269	1.399	1.545	1.699	1.720	1.860	1.999	2.167	2.308
4.030	4.222	4.291	4.465	4.661	4.875	4.908	5.122	5.351	5.627	5.846

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.449	1.400	1.344	1.319	1.300	1.287	1.309	1.305	1.301	1.298	1.300
36.24	37.83	49.70	50.64	51.28	51.66	41.30	41.43	41.51	41.56	41.61
2.461	2.610	2.756	2.841	2.903	2.943	2.967	2.981	2.989	2.994	2.997
6.076	6.313	6.597	6.824	7.063	7.308	7.547	7.794	8.042	8.292	8.542

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 12 , 4
1.298	1.296	1.294	1.280	1.277	1.274	
41.65	41.71	41.81	49.10	49.42	50.02	
2.998	2.999	2.999	3.000	3.000	3.000	
8.792	9.042	9.292	9.553	9.803	10.054	

177 ISOPHTHALIC ACID C8H604

-1	28.0	3.720	166.13
-2	53.0	4.600	

	3.00	3.25	3.50
pHL			
RE	4.711	4.007	3.469
t	31.55	30.03	29.28
Z	0.625	0.741	0.866
pHS	3.712	3.835	3.959

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.007	2.611	2.481	2.261	2.070	1.923	1.902	1.810	1.749	1.727	1.706
29.09	29.42	26.59	27.16	27.86	28.56	32.09	32.63	33.03	30.16	30.30
1.012	1.183	1.265	1.405	1.555	1.694	1.711	1.811	1.884	1.933	1.960
4.099	4.263	4.342	4.490	4.670	4.877	4.908	5.123	5.354	5.604	5.836

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.692	1.683	1.667	1.663	1.660	1.656	1.680	1.678	1.677	1.675	1.678
30.39	30.44	39.85	39.85	39.84	39.82	30.47	30.48	30.48	30.49	30.51
1.977	1.987	1.993	1.996	1.998	1.999	1.999	2.000	2.000	2.000	2.000
6.079	6.326	6.607	6.854	7.103	7.352	7.574	7.823	8.073	8.323	8.574

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 12 , 7
1.676	1.674	1.672	1.661	1.658	1.654	
30.54	30.60	30.70	37.15	37.52	38.23	
2.000	2.000	2.000	2.000	2.000	2.000	
8.824	9.074	9.325	9.600	9.851	10.104	

178 o-ISOPROPYLBENZOIC ACID C10H1202

	-1	24.7	3.635	164.20		pHL	3.00	3.25	3.50
						RE	5.753	5.118	4.642
						t	32.26	29.66	27.90
						Z	0.570	0.643	0.711
						pHS	3.730	3.862	3.997

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.251	3.939	3.903	3.731	3.596	3.502	3.483	3.429	3.395	3.404	3.392
26.61	25.73	22.18	21.78	21.49	21.30	24.87	24.77	24.70	21.45	21.43
0.779	0.844	0.858	0.899	0.934	0.960	0.963	0.978	0.987	0.992	0.996
4.152	4.335	4.384	4.553	4.754	4.979	5.018	5.251	5.493	5.720	5.961

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.383	3.375	3.352	3.349	3.346	3.342	3.381	3.379	3.375	3.371	3.378
21.41	21.40	30.93	30.92	30.91	30.90	21.37	21.37	21.38	21.40	21.44
0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.208	6.457	6.779	7.029	7.278	7.528	7.707	7.957	8.207	8.457	8.710

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
3.374	3.370	3.364	3.346	3.339	3.328	
21.50	21.62	21.83	28.87	29.94	32.19	
1.000	1.000	1.000	1.000	1.000	1.000	
8.961	9.212	9.465	9 790	10.050	10.320	

179 p-ISOPROPYLBENZOIC ACID C10H1202

	-1	24.7	4.354	164.20		pHL	3.00	3.25	3.50
						RE	9.836	8.376	7.267
						t	30.93	28.84	27.42
						Z	0.327	0.386	0.446
						pHS	4.020	4.130	4.236

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.310	5.476	5.108	4.683	4.289	3.966	3.893	3.694	3.556	3.496	3.448
26.36	25.59	21.94	21.67	21.44	21.29	24.82	24.74	24.69	21.44	21.42
0.516	0.598	0 647	0.708	0.776	0.842	0.857	0.904	0.940	0.965	0.979
4.357	4.499	4.588	4.709	4.862	5.047	5.098	5.296	5.518	5.757	5.978

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8 25	8.50
3.415	3.394	3.361	3.354	3.349	3.343	3.382	3.379	3.376	3.372	3.378
21.41	21.40	30.93	30.92	30.91	30.90	21.37	21.37	21.38	21.40	21.44
0.987	0.993	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.216	6.460	6.784	7.030	7.279	7.528	7.707	7 957	8.207	8.457	8.710

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
3.374	3.370	3.364	3.346	3.339	3.328	
21.50	21.62	21.83	28.87	29.94	32.19	
1.000	1.000	1 000	1 000	1.000	1.000	
8.961	9.212	9.465	9.790	10.050	10.320	

180 ISOPROPYLMALONIC ACID C6H1004

	-1	26 0	2.943	146.14		pHL	3.00	3.25	3.50
	-2	52.0	5.879			RE	3.901	3.658	3.480
						t	32.50	29.47	27.49
						Z	0.807	0.863	0.909
						pHS	3.519	3.682	3.851

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.337	3.218	3.226	3.127	3 012	2.866	2.831	2.654	2.455	2.211	2.079
26.19	25.48	22.21	22.08	22 33	22.97	26.57	27.60	28.84	27.43	28.29
0.950	0.987	0.992	1.025	1.067	1.125	1.138	1.221	1.328	1.505	1.610
4.043	4.257	4.287	4.492	4.718	4.952	4.998	5.225	5.450	5.757	5.938

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.962	1.869	1.781	1.747	1.723	1.707	1.725	1.719	1.715	1.712	1.714
29.06	29.67	39.70	39.93	40.07	40.14	30.65	30 68	30.70	30.72	30.75
1.716	1.809	1.894	1.933	1.960	1.977	1.986	1.992	1.996	1.997	1.999
6.142	6.363	6.663	6.882	7 118	7 362	7 584	7.829	8.078	8.327	8.578

8.75	9.00	9.25	9 50	9.75	10.00	(Ref.) 12 , 2
1.712	1.709	1.707	1.696	1.692	1.689	
30.79	30.84	30 95	37.54	37.93	38 67	
1.999	2.000	2 000	2.000	2 000	2.000	
8.828	9 078	9.328	9.604	9.856	10.109	

181 ISOVALERIC ACID C5H1002

	-1	32.1	4.780		102.13		pHL	3.00	3.25	3.50
							RE	11.600	9.710	8.291
							t	25.12	23.80	22.90
							Z	0.210	0.251	0.295
							pHS	4.185	4.286	4.380

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.053	5.942	5.112	4.612	4.107	3.647	3.501	3.206	2.969	2.787	2.707
22.20	21.67	18.83	18.67	18.53	18.42	21.08	21.03	20.99	18.52	18.51
0.348	0.415	0.487	0.541	0.610	0.689	0.718	0.787	0.851	0.915	0.942
4.484	4.605	4.729	4.823	4.943	5.093	5.154	5.313	5.503	5.773	5.957

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.646	2.606	2.570	2.558	2.549	2.544	2.562	2.560	2.557	2.555	2.558
18.50	18.49	25.73	25.72	25.72	25.71	18.46	18.46	18.47	18.48	18.50
0.964	0.979	0.990	0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.174	6.408	6.719	6.958	7.204	7.452	7.647	7.896	8.146	8.395	8.647

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.556	2.554	2.551	2.543	2.539	2.534	
18.54	18.60	18.72	23.87	24.39	25.39	
1.000	1.000	1.000	1.000	1.000	1.000	
8.898	9.149	9.400	9.703	9.958	10.218	

182 ITACONIC ACID C5H604

	-1	28.0	3.815		130.10		pHL	3.00	3.25	3.50
	-2	56.0	5.449				RE	5.643	4.892	4.317
							t	29.41	27.48	26.26
							Z	0.509	0.589	0.670
							pHS	3.771	3.895	4.020

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.820	3.385	3.230	2.959	2.690	2.434	2.377	2.170	1.989	1.827	1.747
25.52	25.25	22.33	22.63	23.28	24.26	27.71	28.80	29.89	28.12	28.66
0.761	0.864	0.915	1.003	1.111	1.237	1.267	1.397	1.536	1.702	1.788
4.161	4.329	4.412	4.563	4.745	4.947	4.996	5.195	5.406	5.691	5.881

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.684	1.640	1.600	1.584	1.574	1.567	1.585	1.582	1.580	1.578	1.580
29.09	29.39	38.42	38.51	38.56	38.58	29.78	29.79	29.81	29.82	29.84
1.861	1.914	1.954	1.972	1.984	1.991	1.995	1.997	1.998	1.999	1.999
6.097	6.331	6.616	6.851	7.094	7.341	7.567	7.815	8.065	8.314	8.565

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) 12 , 2
1.579	1.577	1.575	1.565	1.563	1.560	
29.87	29.92	30.01	36.07	36.40	37.03	
2.000	2.000	2.000	2.000	2.000	2.000	
8.815	9.065	9.315	9.587	9.838	10.091	

183 2-KETOGLUTARIC ACID C5H605

	-1	33.6	2.800		146.10		pHL	3.00	3.25	3.50
	-2	59.0	5.006				RE	2.869	2.675	2.523
							t	27.86	25.63	24.40
							Z	0.849	0.916	0.980
							pHS	3.418	3.590	3.768

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.387	2.251	2.232	2.106	1.972	1.843	1.822	1.718	1.634	1.582	1.548
23.93	24.19	21.77	22.59	23.74	25.02	28.13	29.28	30.23	28.22	28.60
1.048	1.130	1.152	1.247	1.364	1.497	1.517	1.642	1.754	1.850	1.904
3.967	4.184	4.235	4.438	4.652	4.874	4.908	5.123	5.350	5.613	5.832

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.524	1.509	1.491	1.485	1.481	1.477	1.495	1.494	1.492	1.491	1.493
28.86	29.02	37.46	37.51	37.53	37.53	29.20	29.21	29.22	29.23	29.24
1.942	1.966	1.982	1.990	1.994	1.997	1.998	1.999	1.999	2.000	2.000
6.067	6.311	6.588	6.832	7.079	7.328	7.557	7.806	8.056	8.306	8.556

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10
1.492	1.490	1.488	1.480	1.478	1.475	
29.27	29.32	29.40	35.11	35.41	35.97	
2.000	2.000	2.000	2.000	2.000	2.000	
8.806	9.057	9.307	9.576	9.827	10.078	

184 LACTIC ACID (S) C3H6O3

-1	36.5	3.860	90.08				pHL	3.00	3.25	3.50
							RE	4.778	4.146	3.673
							t	24.01	22.53	21.53
							Z	0.455	0.526	0.595
							pHS	3.754	3.876	3.996

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.276	2.943	2.830	2.659	2.513	2.403	2.388	2.323	2.281	2.267	2.253
20.77	20.22	17.80	17.58	17.41	17.29	19.65	19.59	19.55	17.37	17.36
0.669	0.747	0.782	0.834	0.884	0.925	0.930	0.957	0.974	0.985	0.991
4.134	4.297	4.379	4.524	4.703	4.913	4.949	5.167	5.402	5.644	5.879

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.243	2.237	2.228	2.225	2.223	2.221	2.235	2.234	2.233	2.231	2.234
17.35	17.35	23.68	23.67	23.67	23.66	17.32	17.32	17.33	17.34	17.35
0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.123	6.370	6.669	6.917	7.167	7.416	7.619	7.869	8.119	8.369	8.620

8.75	9.00	9.25	9.50	9.75	10.00	(Ref) - 3 , 1
2.233	2.231	2.229	2.223	2.221	2.218	
17.38	17.43	17.52	21.96	22.34	23.06	
1.000	1.000	1.000	1.000	1.000	1.000	
8.870	9.121	9.372	9.665	9.919	10.176	

185 LAURYLSULFONIC ACID C12H26O3S

-1	22.9	1.000	250.40				pHL	3.00	3.25	3.50
							RE	3.641	3.637	3.635
							t	36.88	32.73	30.07
							Z	0.997	0.998	0.999
							pHS	3.439	3.634	3.830

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.633	3.631	3.660	3.658	3.656	3.652	3.642	3.638	3.634	3.665	3.662
28.30	27.19	23.48	22.90	22.53	22.32	26.19	26.07	25.99	22.47	22.45
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
4.043	4.273	4.278	4.497	4.732	4.976	5.013	5.259	5.507	5.729	5.977

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.658	3.654	3.629	3.626	3.623	3.619	3.665	3.663	3.659	3.655	3.662
22.43	22.42	32.74	32.73	32.71	32.70	22.38	22.39	22.40	22.42	22.47
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.226	6.475	6.802	7.052	7.302	7.551	7.726	7.976	8.226	8.476	8.730

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) - 2 , 12
3.657	3.652	3.646	3.624	3.614	3.600	
22.54	22.68	22.93	30.68	32.02	34.99	
1.000	1.000	1.000	1.000	1.000	1.000	
8.981	9.233	9.486	9.818	10.081	10.357	

186 LEVULINIC ACID C5H8O3

-1	33.4	4.602	116.12				pHL	3.00	3.25	3.50
							RE	9.495	7.988	6.855
							t	24.60	23.30	22.40
							Z	0.247	0.294	0.344
							pHS	4.097	4.200	4.298

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.870	4.991	4.391	3.987	3.586	3.229	3.132	2.906	2.732	2.612	2.553
21.71	21.20	18.47	18.31	18.17	18.06	20.62	20.56	20.52	18.15	18.14
0.403	0.476	0.546	0.603	0.672	0.749	0.772	0.835	0.889	0.937	0.959
4.406	4.533	4.652	4.752	4.882	5.043	5.099	5.270	5.471	5.735	5.932

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.511	2.484	2.458	2.449	2.443	2.439	2.456	2.454	2.452	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13
0.975	0.986	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000
6.157	6.396	6.703	6.945	7.192	7.441	7.638	7.887	8.137	8.387	8.639

8.75	9.00	9.25	9.50	9.75	10.00	(Ref) 10 , 3
2.451	2.449	2.446	2.439	2.436	2.432	
18.16	18.22	18.33	23.25	23.72	24.62	
1.000	1.000	1.000	1.000	1.000	1.000	
8.889	9.140	9.391	9.691	9.945	10.204	

187 MALEIC ACID C4H4O4 116.07

-1	41.3	1.921	
-2	62.4	6.225	

	pHL	3.00	3.25	3.50
	RE	2.037	2.005	1.984
	t	24.74	22.20	20.64
	Z	0.960	0.976	0.987
	pHS	3.246	3.452	3.662

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.969	1.957	1.964	1.953	1.939	1.919	1.916	1.884	1.837	1.765	1.696
19.69	19.17	17.16	16.96	16.99	17.26	19.45	20.07	21.07	20.73	22.21
0.996	1.005	1.005	1.015	1.029	1.052	1.055	1.094	1.157	1.275	1.386
3.886	4.123	4.132	4.362	4.604	4.851	4.875	5.121	5.368	5.671	5.887

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.624	1.557	1.484	1.452	1.427	1.411	1.418	1.412	1.408	1.405	1.406
23.77	25.22	34.13	34.95	35.54	35.91	28.34	28.46	28.53	28.58	28.61
1.514	1.643	1.783	1.856	1.910	1.947	1.968	1.982	1.990	1.994	1.997
6.108	6.336	6.637	6.850	7.081	7.323	7.557	7.801	8.049	8.298	8.548

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 10 , 1
1.405	1.403	1.401	1.394	1.392	1.390	
28.65	28.70	28.78	34.15	34.42	34.91	
1.998	1.999	1.999	2.000	2.000	2.000	
8.798	9.048	9.298	9.564	9.815	10.066	

188 MALIC ACID C4H6O5 134.09

-1	32.6	3.460	
-2	59.0	5.050	

	pHL	3.00	3.25	3.50
	RE	3.897	3.436	3.082
	t	27.43	25.72	24.76
	Z	0.640	0.730	0.821
	pHS	3.610	3.748	3.889

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.777	2.508	2.430	2.247	2.068	1.906	1.878	1.755	1.659	1.595	1.557
24.35	24.53	22.12	22.81	23.82	25.01	28.16	29.26	30.19	28.20	28.58
0.921	1.034	1.081	1.188	1.317	1.459	1.482	1.613	1.732	1.838	1.895
4.050	4.236	4.311	4.481	4.676	4.887	4.924	5.133	5.355	5.621	5.836

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.530	1.512	1.492	1.486	1.481	1.478	1.495	1.494	1.492	1.491	1.493
28.85	29.02	37.46	37.51	37.53	37.53	29.20	29.21	29.22	29.23	29.24
1.937	1.963	1.980	1.988	1.993	1.996	1.998	1.999	1.999	2.000	2.000
6.069	6.312	6.589	6.832	7.080	7.329	7.557	7.806	8.056	8.306	8.556

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 10 , 7
1.492	1.490	1.488	1.480	1.478	1.475	
29.27	29.32	29.40	35.11	35.41	35.97	
2.000	2.000	2.000	2.000	2.000	2.000	
8.806	9.057	9.307	9.576	9.827	10.078	

189 MALONIC ACID (S) C3H4O4 104.06

-1	40.7	2.847	
-2	67.0	5.696	

	pHL	3.00	3.25	3.50
	RE	2.489	2.317	2.195
	t	24.10	22.12	20.87
	Z	0.795	0.856	0.907
	pHS	3.384	3.554	3 730

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.102	2.028	2.026	1.971	1.910	1.836	1.824	1.737	1.640	1.528	1.464
20.11	19.78	17.73	17.83	18.29	19.16	21.57	22.89	24.44	24.18	25.23
0.951	0.992	0.998	1.037	1.087	1.157	1.168	1.264	1.386	1.563	1.671
3.928	4.148	4.182	4.394	4.625	4.864	4.897	5.129	5.362	5.664	5.860

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.409	1.367	1.330	1.314	1.303	1.296	1.306	1.304	1.302	1.300	1.301
26.13	26.81	34.51	34.78	34.96	35.05	27.83	27.87	27.89	27.91	27.93
1.772	1.853	1.917	1.949	1.970	1.983	1.990	1.994	1.997	1.998	1.999
6.076	6.308	6.588	6.816	7.058	7.304	7.541	7.788	8.038	8.287	8.538

8.75	9.00	9.25	9.50	9.75	10.00	(Ref) : 10 , 1
1.300	1.299	1.298	1.292	1.291	1.289	
27.95	28.00	28.07	33.02	33.25	33.68	
1.999	2.000	2.000	2.000	2 000	2.000	
8.787	9.037	9.288	9.549	9 800	10 051	

190 MANDELIC ACID C8H8O3

-1	28.3	3.411	152.15

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	4.483	4.041	3.715	3.454	3.253	3.241	3.130	3.047	2.991	2.981
t	29.55	27.15	25.53	24.36	23.56	20.50	20.13	19.87	19.70	22.80
Z	0.637	0.709	0.773	0.834	0.887	0.897	0.930	0.956	0.973	0.975
pHS	3.626	3.767	3.912	4.079	4.273	4.315	4.496	4.708	4.938	4.973

4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25
2.981	2.949	2.928	2.938	2.930	2.925	2.920	2.904	2.902	2.900	2.897
22.80	22.70	22.65	19.82	19.80	19.79	19.79	28.05	28.04	28.03	28.02
0.975	0.986	0.992	0.995	0.997	0.998	0.999	1.000	1.000	1.000	1 000
4.973	5.210	5.454	5.683	5.927	6.175	6.424	6.738	6.987	7.237	7.487

7.50	7.75	8.00	8.25	8.50	8.75	9.00
2.925	2.923	2.921	2.918	2.923	2.920	2.917
19.75	19.75	19.76	19.78	19.80	19.85	19 94
1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.674	7.924	8.174	8.424	8.676	8.927	9.178

9.25	9.50	9.75	10.00	(Ref.) : 11 , 7	
2.913	2.901	2.896	2.889		
20.09	26 06	26.78	28.24		
1.000	1 000	1.000	1.000		
9.430	9.742	10.000	10.263		

191 MES (S) C6H13NO4S

-1	28.0	6.095	195.23

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	51.093	41.949	35.109	29.119	23.671	17.940	15.770	13.471	11.209	9.832
t	27.00	25.62	24.68	23.94	23.39	20.11	19.98	19.86	19.77	22.74
Z	0.053	0.065	0.078	0.094	0.116	0.155	0.177	0.207	0.250	0.286
pHS	4.838	4.929	5.012	5.101	5.201	5.343	5.410	5.495	5.598	5.678

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
8.414	7.069	4.950	4.581	4.177	3.799	3.323	3.200	3.099	3.028	3.021
22.70	22.68	19.91	19.90	19.90	19.90	28.21	28.21	28.22	28.22	19.87
0.335	0.401	0.584	0.632	0.695	0.767	0.878	0.913	0.944	0.966	0.978
5.776	5.897	6.212	6.300	6.422	6.580	6.921	7.083	7.285	7 511	7.711

7 75	8.00	8.25	8.50	8.75	9.00	9.25
2.993	2.975	2.963	2.963	2.957	2.952	2.947
19.87	19.88	19.89	19.92	19.97	20.06	20.22
0.987	0.993	0.996	0.998	0.999	0.999	1.000
7.940	8.182	8.429	8.681	8.930	9.181	9.433

9.50	9.75	10.00	(Ref.) , 11 , 9		
2.934	2.929	2.921			
26.26	27.01	28.51	2-(N-Morpholino)ethane sulfonic		
1.000	1.000	1.000	acid		
9.746	10.003	10.268			

192 MESACONIC ACID C5H6O4

-1	28.0	3.098	130.10
-2	56.0	4.750	

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	3.612	3.257	2.968	2.704	2.453	2.392	2.206	2.031	1.884	1.861
t	31.58	29.33	28.16	27.76	28.05	25.26	25.94	26.76	27.57	30.94
Z	0.809	0.902	0.995	1.099	1.220	1.264	1.380	1.510	1.640	1.657
pHS	3.527	3.682	3.843	4.022	4.221	4.288	4.466	4.663	4.876	4.909

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
1.759	1.684	1.647	1.620	1.602	1.590	1.573	1.569	1.565	1.562	1.582
31.56	32.03	29.40	29.57	29.68	29.75	38.63	38.64	38.63	38.62	29.80
1.762	1.847	1.910	1.945	1.967	1.981	1.990	1.994	1.997	1.998	1.999
5.123	5.351	5.607	5.833	6.072	6.318	6.596	6.842	7.091	7 340	7.565

7.75	8.00	8.25	8.50	(Ref.) 12 , 2	
1.581	1.579	1.577	1.580		
29.81	29.81	29.82	29.84		
1.999	2.000	2.000	2.000		
7.814	8.064	8.314	8 565		

9.25	9.50	9.75	10.00	(Ref.) 12 , 2	
1.575	1.565	1.563	1.560		
30.02	36.07	36.40	37.03		
2.000	2.000	2.000	2.000		
9 315	9.587	9.838	10.091		

193 MESOTARTARIC ACID C4H606

-1	32.4	3.222	150.09
-2	60.6	4.815	

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	3.392	3.029	2.743	2.491	2.261	2.201	2.035	1.878	1.743	1.723
t	28.30	26.49	25.57	25.32	25.71	23.32	24.10	25.09	26.09	29.16
Z	0 743	0.839	0.934	1.040	1.162	1.208	1.325	1.459	1.595	1.614
pHS	3.531	3.680	3.835	4.009	4.205	4.275	4.453	4.651	4.865	4.898

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
1.626	1.555	1.517	1.490	1.472	1.461	1.446	1.442	1.438	1.435	1.452
29.97	30.60	28.35	28.58	28.74	28.83	37.00	37.02	37.02	37.02	28.91
1.728	1.822	1.895	1.935	1.961	1.978	1.988	1.993	1.996	1 998	1.999
5.110	5.338	5.598	5.822	6.060	6.306	6.579	6.825	7.073	7.322	7.552

7.75	8.00	8.25	8.50	8.75	9.00	9.25
1.451	1.449	1.448	1.450	1.449	1.448	1.446
28.92	28.93	28.94	28.95	28.98	29.02	29.11
1.999	2.000	2.000	2.000	2.000	2.000	2.000
7.802	8.052	8.302	8.552	8.802	9.052	9.303

9.50	9.75	10.00	(Ref.) · 12 , 7		
1.438	1.436	1.434			
34.64	34.93	35.45			
2.000	2.000	2.000			
9.570	9.821	10.072			

194 METHACRYLIC ACID C4H602

-1	36.7	4.483	86.09

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	7.858	6.634	5.716	4.918	4.208	3.738	3.411	3.089	2.808	2.739
t	23.20	22.03	21.22	20.59	20.12	17.64	17.49	17.36	17.25	19.58
Z	0.272	0.323	0.375	0.438	0.513	0.583	0.640	0.709	0.782	0.802
pHS	4.033	4.137	4.237	4.347	4.478	4.597	4.701	4.835	5.002	5.055

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
2.561	2.427	2.340	2.295	2.263	2.243	2.224	2.218	2.214	2.210	2.224
19.52	19.49	17.33	17.32	17.31	17.31	23.59	23.59	23.59	23.58	17.27
0.859	0.908	0.948	0.967	0.980	0.988	0.994	0.997	0.998	0.999	0.999
5.232	5.439	5.702	5.905	6.134	6.375	6.676	6.919	7.166	7.415	7.619

7.75	8.00	8.25	8.50	8.75	9.00	9.25
2.222	2.221	2.219	2.221	2.220	2.218	2.216
17.28	17.28	17.29	17.30	17.33	17.39	17.48
1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.868	8.118	8.368	8.619	8.869	9.120	9.371

9.50	9.75	10.00	(Ref.) : 10
2.211	2.208	2.205	
21.89	22.26	22.97	
1.000	1.000	1.000	
9.664	9.918	10.174	

195 METHOXYACETIC ACID C3H603

-1	36.5	3.570	90.08

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	3.934	3.478	3.139	2.863	2.642	2.597	2.480	2.387	2.323	2.315
t	24.46	22 79	21.66	20.83	20.24	17.86	17.60	17.41	17.29	19.65
Z	0.556	0.630	0.700	0.769	0.836	0.855	0.896	0.932	0.958	0.961
pHS	3.637	3.770	3.905	4.059	4.241	4.303	4.469	4.669	4.893	4.923

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
2.277	2.254	2.252	2.244	2.238	2.234	2.226	2.224	2.223	2.221	2.235
19.59	19.55	17.37	17.36	17.35	17.35	23.68	23.67	23.67	23.66	17.32
0.977	0.987	0.992	0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000
5.154	5.395	5.633	5.874	6.121	6.369	6.668	6.917	7.166	7.416	7.619

7.75	8.00	8.25	8.50	8.75	9.00	9.25
2,234	2,233	2,231	2,234	2,233	2,231	2,229
17.32	17.33	17.34	17.35	17,38	17,43	17,52
1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.869	8.119	8.369	8.620	8.870	9.121	9.372

9.50	9.75	10.00	(Ref.) : 3 , 7
2.223	2.221	2.218	
21,96	22.34	23,06	
1.000	1.000	1.000	
9.665	9 919	10.176	

196 m-METHOXYBENZOIC ACID C8H8O3

	-1	28.3	4.088		152.15		pHL	3.00	3.25	3.50
							RE	7.060	6.077	5.335
							t	28.31	26.42	25.13
							Z	0.399	0.465	0.531
							pHS	3.885	4.001	4.115

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.701	4.159	3.961	3.682	3.433	3.240	3.205	3.088	3.011	2.986	2.959
24.17	23.48	20.33	20.06	19.85	19.70	22.77	22.69	22.64	19.82	19.80
0.605	0.687	0.727	0.784	0.843	0.895	0.904	0.939	0.963	0.978	0.987
4.245	4.398	4.482	4.615	4.784	4.984	5.028	5.239	5.469	5.707	5.937

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.941	2.929	2.909	2.905	2.901	2.898	2.925	2.923	2.921	2.918	2.923
19.79	19.79	28.05	28.04	28.03	28.02	19.75	19.75	19.76	19.78	19.80
0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.179	6.426	6.741	6.988	7.237	7.487	7.674	7.924	8.174	8.424	8.676

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
2.920	2.917	2.913	2.901	2.896	2.889	
19.85	19.94	20.09	26.06	26.78	28.24	
1.000	1.000	1.000	1.000	1.000	1.000	
8.927	9.178	9.430	9.742	10.000	10.263	

197 o-METHOXYBENZOIC ACID C8H8O3

	-1	28.3	4.094		152.15		pHL	3.00	3.25	3.50
							RE	7.093	6.103	5.356
							t	28.30	26.41	25.13
							Z	0.397	0.463	0.529
							pHS	3.888	4.003	4.117

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.718	4.173	3.971	3.690	3.439	3.244	3.208	3.091	3.013	2.986	2.959
24.17	23.48	20.32	20.06	19.85	19.70	22.77	22.69	22.64	19.82	19.80
0.603	0.684	0.725	0.783	0.842	0.894	0.903	0.938	0.963	0.978	0.987
4.246	4.400	4.483	4.617	4.785	4.984	5.029	5.240	5.470	5.708	5.938

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.941	2.929	2.909	2.905	2.901	2.898	2.925	2.923	2.921	2.918	2.923
19.79	19.79	28.05	28.04	28.03	28.02	19.75	19.75	19.76	19.78	19.80
0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
6.179	6.426	6.741	6.988	7.237	7.487	7.674	7.924	8.174	8.424	8.676

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
2.920	2.917	2.913	2.901	2.896	2.889	
19.85	19.94	20.09	26.06	26.78	28.24	
1.000	1.000	1.000	1.000	1.000	1.000	
8.927	9.178	9.430	9.742	10.000	10.263	

198 p-METHOXYBENZOIC ACID C8H8O3

	-1	30.0	4.471		152.15		pHL	3.00	3.25	3.50
							RE	9.253	7.823	6.745
							t	26.64	25.07	24.01
							Z	0.284	0.337	0.392
							pHS	4.048	4.154	4.256

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.810	4.985	4.511	4.114	3.731	3.403	3.324	3.118	2.967	2.880	2.829
23.20	22.60	19.58	19.38	19.21	19.08	21.95	21.89	21.85	19.19	19.18
0.456	0.534	0.596	0.656	0.725	0.797	0.816	0.872	0.917	0.952	0.970
4.369	4.503	4.610	4.719	4.859	5.032	5.085	5.269	5.480	5.733	5.942

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.793	2.770	2.744	2.737	2.732	2.727	2.751	2.749	2.746	2.744	2.747
19.17	19.17	26.93	26.93	26.92	26.91	19.13	19.13	19.14	19.15	19.18
0.982	0.990	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000
6.174	6.416	6.729	6.973	7.221	7.470	7.661	7.911	8.160	8.410	8.663

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.745	2.742	2.739	2.729	2.725	2.719	
19.22	19.30	19.43	25.00	25.62	26.84	
1.000	1.000	1.000	1.000	1.000	1.000	
8.913	9.164	9.416	9.723	9.980	10.242	

199 p-METHOXYPHENYLACETIC ACID C9H1003

	-1	29.7	4.361

166.18

pHL	3.00	3.25	3.50
RE	8.480	7.200	6.235
t	26.96	25.33	24.21
Z	0.314	0.371	0.429
pHS	3.999	4.108	4.213

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.402	4.671	4.293	3.934	3.595	3.312	3.249	3.074	2.948	2.884	2.841
23.37	22.75	19.71	19.50	19.32	19.18	22.10	22.03	21.98	19.30	19.28
0.497	0.578	0.635	0.694	0.762	0.829	0.845	0.895	0.934	0.962	0.976
4.330	4.469	4.570	4.685	4.833	5.013	5.064	5.256	5.473	5.721	5.938

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.812	2.793	2.770	2.764	2.760	2.756	2.780	2.778	2.776	2.773	2.777
19.27	19.27	27.12	27.11	27.11	27.10	19.23	19.24	19.24	19.26	19.28
0.986	0.992	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.173	6.417	6.730	6.976	7.224	7.473	7.663	7.913	8.163	8.413	8.665

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 2 , 7				
2.774	2.772	2.768	2.758	2.753	2.747					
19.33	19.40	19.54	25.18	25.81	27.07					
1.000	1.000	1.000	1.000	1.000	1.000					
8.915	9.166	9.418	9.727	9.983	10.245					

200 METHYLETHYLMALONIC ACID C6H1004

	-1	25.0	2.860
	-2	50.0	6.413

146.14

pHL	3.00	3.25	3.50
RE	3.954	3.743	3.593
t	33.54	30.28	28.13
Z	0.831	0.879	0.917
pHS	3.514	3.680	3.853

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.479	3.393	3.411	3.352	3.292	3.221	3.201	3.103	2.965	2.745	2.566
26.66	25.76	22.34	21.96	21.83	21.97	25.57	26.03	26.81	25.10	26.23
0.949	0.974	0.976	0.994	1.013	1.036	1.041	1.076	1.129	1.240	1.336
4.048	4.265	4.285	4.492	4.721	4.960	5.001	5.241	5.480	5.796	5.994

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.380	2.207	2.001	1.925	1.864	1.821	1.825	1.809	1.799	1.791	1.792
27.40	28.50	39.61	40.12	40.52	40.77	31.00	31.10	31.16	31.21	31.25
1.451	1.576	1.743	1.819	1.882	1.928	1.956	1.974	1.985	1.992	1.995
6.199	6.412	6.740	6.930	7.148	7.382	7.605	7.842	8.087	8.335	8.586

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 2				
1.788	1.785	1.782	1.769	1.766	1.761					
31.30	31.36	31.48	38.37	38.80	39.61					
1.997	1.998	1.999	2.000	2.000	2.000					
8.835	9.085	9.335	9.614	9.866	10.119					

201 METHYLMALONIC ACID C4H604

	-1	29.3	3.072
	-2	58.5	5.787

118.09

pHL	3.00	3.25	3.50
RE	3.665	3.384	3.177
t	29.59	27.03	25.36
Z	0.757	0.822	0.877
pHS	3.518	3.675	3.839

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.010	2.871	2.866	2.758	2.636	2.491	2.459	2.293	2.114	1.901	1.793
24.28	23.72	20.84	20.82	21.18	21.92	25.13	26.22	27.48	26.38	27.17
0.928	0.975	0.983	1.024	1.075	1.142	1.157	1.248	1.362	1.545	1.647
4.024	4.234	4.273	4.474	4.696	4.929	4.974	5.197	5.421	5.730	5.911

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.698	1.626	1.559	1.533	1.514	1.502	1.515	1.511	1.508	1.506	1.507
27.87	28.41	37.24	37.43	37.55	37.62	29.25	29.28	29.29	29.31	29.33
1.748	1.833	1.907	1.942	1.966	1.980	1.988	1.993	1.996	1.998	1.999
6.116	6.339	6.632	6.852	7.089	7.334	7.563	7.810	8.058	8.308	8.558

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1				
1.506	1.504	1.502	1.494	1.491	1.489					
29.36	29.41	29.50	35.26	35.57	36.14					
1.999	2.000	2.000	2.000	2.000	2.000					
8.808	9.058	9.308	9.578	9.829	10.080					

202 METHYLSULFONIC ACID CH4O3S

	-1	50.6	-2.000

96.10

pHL	3.00	3.25	3.50
RE	1.584	1.584	1.584
t	22.29	19.92	18.52
Z	1.000	1.000	1.000
pHS	3.145	3.371	3.598

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.584	1.583	1.587	1.587	1.586	1.586	1.585	1.585	1.584	1.588	1.587
17.67	17.17	15.57	15.29	15.13	15.04	16.72	16.68	16.65	15.10	15.09
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.834	4.077	4.079	4.317	4.562	4.810	4.823	5.072	5.321	5.561	5.811
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.587	1.586	1.584	1.584	1.583	1.583	1.588	1.587	1.587	1.586	1.587
15.09	15.09	19.58	19.58	19.58	19.58	15.06	15.06	15.06	15.07	15.08
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.060	6.310	6.587	6.837	7.087	7.337	7.560	7.810	8.060	8.310	8.561
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 2 , 12				
1.587	1.586	1.585	1.584	1.583	1.582					
15.09	15.12	15.17	18.26	18.45	18.78					
1.000	1.000	1.000	1.000	1.000	1.000					
8.811	9.061	9.312	9.584	9.836	10.089					

203 2-NAPHTALENESULFONIC ACID C10H8O3S

	-1	31.3	0.167

208.23

pHL	3.00	3.25	3.50
RE	2.614	2.613	2.613
t	29.64	26.35	24.30
Z	0.999	1.000	1.000
pHS	3.318	3.523	3.730

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.612	2.611	2.626	2.625	2.624	2.621	2.618	2.616	2.613	2.628	2.627
22.99	22.18	19.51	19.08	18.82	18.67	21.45	21.37	21.32	18.77	18.75
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.951	4.186	4.190	4.416	4.656	4.901	4.929	5.175	5.424	5.653	5.901
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.625	2.623	2.612	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.151	6.400	6.708	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 2				
2.625	2.622	2.619	2.610	2.607	2.601					
18.79	18.86	18.98	24.28	24.83	25.91					
1.000	1.000	1.000	1.000	1.000	1.000					
8.903	9.154	9.406	9.710	9.966	10.226					

204 NICOTINIC ACID C6H5NO2

	1	34.6	2.070
	-1	-34.6	4.819

123.11

pHL	3.00	3.25	3.50
RE	11.277	9.448	8.068
t	24.32	23.01	22.10
Z	0.200	0.239	0.280
pHS	4.216	4.309	4.398

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.856	5.763	4.887	4.408	3.920	3.468	3.318	3.028	2.791	2.596	2.517
21.38	20.84	18.16	18.01	17.87	17.76	20.21	20.16	20.12	17.83	17.82
0.331	0.395	0.471	0.523	0.590	0.669	0.700	0.770	0.837	0.907	0.936
4.497	4.614	4.743	4.832	4.948	5.094	5.156	5.309	5.495	5.771	5.949
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.456	2.415	2.379	2.367	2.359	2.353	2.368	2.365	2.363	2.361	2.364
17.81	17.81	24.49	24.49	24.49	24.48	17.77	17.78	17.78	17.79	17.81
0.960	0.976	0.988	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
6.162	6.394	6.702	6.939	7.184	7.432	7.632	7.880	8.130	8.380	8.631
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 10				
2.362	2.360	2.357	2.351	2.348	2.344					
17.84	17.90	18.00	22.72	23.15	23.97					
1.000	1.000	1.000	1.000	1.000	1.000					
8.882	9.132	9.383	9.680	9.935	10.193					

205 NITRIC ACID HNO3

	-1	74.1	-1.370		63.01		pHL	3.00	3.25	3.50
							RE	1.069	1.069	1.069
							t	18.57	16.69	15.63
							Z	1.000	1.000	1.000
							pHS	3.020	3.267	3.513
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069
15.03	14.69	13.62	13.43	13.32	13.26	14.39	14.36	14.34	13.29	13.29
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.761	4.010	4.010	4.259	4.508	4.758	4.759	5.009	5.259	5.508	5.758
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069
13.29	13.29	16.31	16.31	16.31	16.31	13.26	13.27	13.27	13.28	13.28
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.008	6.258	6.511	6.761	7.011	7.261	7.507	7.758	8.008	8.258	8.508
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 1 , 2				
1.069	1.069	1.069	1.069	1.069	1.069					
13.29	13.30	13.33	15.38	15.47	15.63					
1.000	1.000	1.000	1.000	1.000	1.000					
8.758	9.008	9.258	9.511	9.761	10.011					

206 2-NITRO-3-BROMOBENZOIC ACID C7H4BrNO4

	-1	28.2	2.495		246.02		pHL	3.00	3.25	3.50
							RE	3.222	3.116	3.045
							t	31.18	27.99	25.92
							Z	0.901	0.933	0.955
							pHS	3.421	3.603	3.790
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.995	2.961	2.979	2.960	2.946	2.936	2.931	2.924	2.919	2.937	2.935
24.53	23.65	20.66	20.20	19.92	19.74	22.85	22.76	22.70	19.86	19.84
0.972	0.983	0.984	0.990	0.994	0.997	0.997	0.998	0.999	0.999	1.000
3.996	4.222	4.234	4.450	4.684	4.927	4.958	5.203	5.451	5.677	5.925
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.932	2.929	2.914	2.913	2.910	2.907	2.936	2.934	2.932	2.929	2.934
19.83	19.83	28.12	28.11	28.10	28.09	19.79	19.79	19.80	19.82	19.84
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.175	6.424	6.738	6.988	7.238	7.488	7.674	7.924	8.174	8.425	8.677
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3				
2.931	2.928	2.924	2.912	2.907	2.899					
19.89	19.98	20.13	26.13	26.86	28.33					
1.000	1.000	1.000	1.000	1.000	1.000					
8.928	9.179	9.431	9.744	10.001	10.265					

207 3-NITRO-2-BROMOBENZOIC ACID C7H4BrNO4

	-1	28.2	2.979		246.02		pHL	3.00	3.25	3.50
							RE	3.686	3.445	3.274
							t	30.47	27.66	25.79
							Z	0.784	0.840	0.886
							pHS	3.506	3.667	3.835
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.145	3.054	3.066	3.015	2.979	2.955	2.949	2.934	2.925	2.941	2.937
24.49	23.64	20.62	20.19	19.91	19.74	22.85	22.76	22.70	19.86	19.84
0.923	0.952	0.954	0.971	0.982	0.990	0.991	0.995	0.997	0.998	0.999
4.025	4.239	4.261	4.464	4.691	4.930	4.963	5.205	5.452	5.679	5.926
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.933	2.929	2.915	2.913	2.910	2.908	2.936	2.934	2.932	2.929	2.934
19.83	19.83	28.12	28.11	28.10	28.09	19.79	19.79	19.80	19.82	19.84
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.175	6.424	6.739	6.988	7.238	7.488	7.674	7.924	8.174	8 425	8.677
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3				
2.931	2.928	2.924	2.912	2.907	2.899					
19.89	19.98	20.13	26.13	26.86	28.33					
1.000	1.000	1.000	1.000	1.000	1.000					
8.928	9.179	9.431	9.744	10.001	10.265					

208 3-NITRO-4-BROMOBENZOIC ACID C7H4BrNO4

	-1	28.2	3.377		246.02		pHL	3.00	3.25	3.50
							RE	4.415	3.991	3.679
							t	29.70	27.25	25.61
							Z	0.650	0.721	0.784
							pHS	3.616	3.758	3.905
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.431	3.241	3.232	3.127	3.049	2.997	2.987	2.957	2.937	2.948	2.941
24.42	23.62	20.55	20.17	19.91	19.74	22.85	22.75	22.70	19.86	19.84
0.843	0.894	0.903	0.934	0.959	0.975	0.977	0.987	0.992	0.995	0.997
4.074	4.270	4.310	4.493	4.706	4.938	4.973	5.210	5.454	5.683	5.928
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.935	2.931	2.915	2.913	2.911	2.908	2.936	2.934	2.932	2.929	2.934
19.83	19.83	28.12	28.11	28.10	28.09	19.79	19.79	19.80	19.82	19.84
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.175	6.425	6.739	6.988	7.238	7.488	7.675	7.924	8.174	8.425	8.677
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3				
2.931	2.928	2.924	2.912	2.907	2.899					
19.89	19.98	20.13	26.13	26.86	28.33					
1.000	1.000	1.000	1.000	1.000	1.000					
8.928	9.179	9.431	9.744	10.001	10.265					

209 2-NITRO-3-CHLOROBENZOIC ACID C7H4ClNO4

	-1	31.3	2.398		201.57		pHL	3.00	3.25	3.50
							RE	2.857	2.771	2.714
							t	29.10	26.14	24.23
							Z	0.912	0.941	0.961
							pHS	3.377	3.563	3.755
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.674	2.648	2.662	2.646	2.636	2.628	2.625	2.619	2.615	2.630	2.628
22.97	22.17	19.49	19.08	18.82	18.67	21.45	21.37	21.32	18.77	18.75
0.976	0.986	0.986	0.991	0.995	0.997	0.997	0.998	0.999	0.999	1.000
3.965	4.194	4.204	4.423	4.659	4.903	4.931	5.176	5.425	5.654	5.902
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.625	2.623	2.612	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.151	6.401	6.708	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3				
2.625	2.622	2.619	2.610	2.607	2.601					
18.79	18.86	18.98	24.28	24.83	25.91					
1.000	1.000	1.000	1.000	1.000	1.000					
8.903	9.154	9.406	9.710	9.966	10.226					

210 3-NITRO-4-CHLOROBENZOIC ACID C7H4ClNO4

	-1	31.3	3.357		201.57		pHL	3.00	3.25	3.50
							RE	3.983	3.595	3.309
							t	27.58	25.40	23.92
							Z	0.646	0.718	0.782
							pHS	3.588	3.731	3.879
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.082	2.909	2.897	2.802	2.732	2.685	2.677	2.650	2.633	2.640	2.634
22.86	22.14	19.39	19.05	18.81	18.67	21.45	21.36	21.31	18.77	18.75
0.841	0.893	0.902	0.934	0.958	0.975	0.977	0.987	0.992	0.995	0.997
4.048	4.244	4.286	4.470	4.683	4.915	4.946	5.184	5.428	5.660	5.904
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.629	2.625	2.613	2.612	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.152	6.401	6.709	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653
8.75	9.00	9.25	9.50	9.75	10.00	(Ref) 3				
2.625	2.622	2.619	2.610	2.607	2.601					
18.79	18.86	18.98	24.28	24.83	25.91					
1.000	1.000	1.000	1.000	1.000	1.000					
8.903	9.154	9.406	9.710	9.966	10.226					

211 3-NITRO-5-CHLOROBENZOIC ACID C7H4ClNO4

	-1	31.3	3.130	201.57		pHL	3.00	3.25	3.50
						RE	3.564	3.277	3.070
						t	28.01	25.62	24.03
						Z	0.725	0.790	0.845
						pHS	3.519	3.673	3.833

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.912	2.796	2.799	2.735	2.689	2.659	2.654	2.636	2.625	2.635	2.631
22.90	22.15	19.43	19.06	18.82	18.67	21.45	21.36	21.31	18.77	18.75
0.893	0.931	0.935	0.958	0.974	0.985	0.986	0.992	0.995	0.997	0.998
4.015	4.223	4.254	4.450	4.672	4.909	4.939	5.180	5.427	5.657	5.903

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.627	2.624	2.613	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.151	6.401	6.709	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.625	2.622	2.619	2.610	2.607	2.601	
18.79	18.86	18.98	24.28	24.83	25.91	
1.000	1.000	1.000	1.000	1.000	1.000	
8.903	9.154	9.406	9.710	9.966	10.226	

212 m-NITROBENZOIC ACID C7H5NO4

	-1	32.3	3.493	167.12		pHL	3.00	3.25	3.50
						RE	4.182	3.730	3.395
						t	26.73	24.73	23.38
						Z	0.594	0.668	0.736
						pHS	3 629	3.766	3.906

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.125	2.913	2.884	2.769	2.680	2.620	2.611	2.576	2.554	2.558	2.550
22.40	21.72	19.04	18.73	18.51	18.36	21.05	20.97	20.93	18.46	18.45
0.802	0.862	0.876	0.913	0.944	0.966	0.969	0.981	0.989	0.994	0.996
4.066	4.254	4.306	4.480	4.686	4.913	4.945	5.179	5.422	5.656	5.898

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.544	2.540	2.529	2.527	2.525	2.523	2.543	2.542	2.540	2.537	2.541
18.44	18.44	25.62	25.62	25.61	25.61	18.40	18.40	18.41	18.42	18.44
0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.146	6.394	6.700	6.950	7.199	7.449	7.644	7.894	8.144	8.394	8.646

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.539	2.537	2.534	2.526	2.523	2.518	
18.48	18.54	18.66	23.77	24.28	25.27	
1.000	1.000	1.000	1.000	1.000	1.000	
8.896	9.147	9.399	9.701	9.956	10.215	

213 o-NITROBENZOIC ACID C7H5NO4

	-1	33.6	2.173	167.12		pHL	3.00	3.25	3.50
						RE	2.575	2.521	2.486
						t	27.94	25.04	23.20
						Z	0.940	0.961	0.975
						pHS	3.332	3.526	3.725

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.461	2.446	2.457	2.448	2.442	2.437	2.434	2.430	2.427	2.439	2.438
22.00	21.26	18.78	18.39	18.14	18.00	20.59	20.51	20.46	18.10	18.08
0.985	0.991	0.991	0.995	0.997	0.998	0.998	0.999	0.999	1.000	1.000
3.941	4.173	4.181	4.404	4.642	4.887	4.912	5.159	5.407	5.638	5.886

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.436	2.434	2.425	2.424	2.423	2.421	2.439	2.438	2.436	2.434	2.437
18.07	18.07	24.97	24.96	24.96	24.95	18.03	18.04	18.04	18.06	18.07
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.136	6.385	6.689	6.938	7.188	7.438	7.636	7.886	8.136	8.386	8.637

8.75	9.00	9.25	9.50	9.75	10.00	(Ref) : 2 , 1
2.436	2.433	2.431	2.424	2.421	2.417	
18.11	18.17	18.28	23.16	23.62	24.51	
1.000	1.000	1.000	1.000	1.000	1.000	
8.888	*9.138*	*9.390*	*9.689*	*9.944*	*10.202*	

214 p-NITROBENZOIC ACID C7H5NO4

	-1	32.3	3.523		167.12		pHL	3.00	3.25	3.50
							RE	4.257	3.788	3.441
							t	26.67	24.70	23.37
							Z	0.583	0.657	0.726
							pHS	3.640	3.775	3.913

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.158	2.936	2.903	2.783	2.690	2.626	2.617	2.580	2.556	2.559	2.551
22.39	21.72	19.03	18.73	18.50	18.36	21.05	20.97	20.93	18.46	18.45
0.793	0.855	0.870	0.909	0.941	0.964	0.967	0.980	0.989	0.993	0.996
4.072	4.258	4.312	4.484	4.688	4.914	4.947	5.180	5.423	5.656	5.899

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.545	2.540	2.529	2.527	2.525	2.523	2.543	2.542	2.540	2.537	2.541
18.44	18.44	25.62	25.62	25.61	25.61	18.40	18.40	18.41	18.42	18.44
0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.146	6.394	6.700	6.950	7.199	7.449	7.644	7.894	8.144	8.394	8.646

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.539	2.537	2.534	2.526	2.523	2.518	
18.48	18.54	18.66	23.77	24.28	25.27	
1.000	1.000	1.000	1.000	1.000	1.000	
8.896	9.147	9.399	9.701	9.956	10.215	

215 m-NITROPHENOL C6H5NO3

	-1	33.4	8.399		139.11		pHL	3.00	3.25	3.50
							RE	[illegible]	[illegible]	[illegible]
							t	23.80	22.79	22.09
							Z	0.004	0.005	0.005
							pHS	5.973	6.060	6.138

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	95.764	80.705	65.677	30.949	28.181
21.54	21.10	18.36	18.28	18.19	18.12	20.53	20.50	20.48	18.21	18.21
0.007	0.008	0.012	0.014	0.016	0.019	0.024	0.028	0.035	0.074	0.081
6.221	6.314	6.474	6.530	6.602	6.690	6.777	6.853	6.945	7.291	7.335

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
24.723	20.887	10.255	9.451	8.430	7.285	4.914	4.555	4.128	3.689	3.161
18.21	18.21	24.87	24.88	24.89	24.90	18.16	18.16	18.16	18.17	18.19
0.093	0.110	0.227	0.247	0.278	0.322	0.486	0.525	0.581	0.653	0.767
7.397	7.478	7.849	7.896	7.964	8.054	8.347	8.414	8.511	8.641	8.883

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.951	2.773	2.643	2.541	2.494	2.464	
18.22	18.28	18.39	23.31	23.78	24.69	
0.824	0.878	0.922	0.958	0.975	0.986	
9.033	9.220	9.435	9.723	9.961	10.213	

216 o-NITROPHENOL C6H5NO3

	-1	33.4	7.234		139.11		pHL	3.00	3.25	3.50
							RE	[illegible]	[illegible]	[illegible]
							t	23.81	22.79	22.09
							Z	0.014	0.017	0.021
							pHS	5.391	5.479	5.558

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
89.568	72.459	51.238	45.044	38.317	31.525	26.323	22.272	18.254	9.625	8.802
21.52	21.09	18.34	18.25	18.16	18.09	20.52	20.49	20.47	18.17	18.17
0.025	0.031	0.045	0.051	0.060	0.073	0.087	0.103	0.126	0.244	0.267
5.641	5.736	5.893	5.952	6.026	6.116	6.202	6.282	6.379	6.722	6.774

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
7.792	6.700	4.268	3.979	3.640	3.300	2.928	2.798	2.678	2.588	2.531
18.17	18.16	24.95	24.96	24.97	24.99	18.10	18.10	18.11	18.12	18.13
0.302	0.352	0.560	0.601	0.659	0.729	0.832	0.872	0.912	0.944	0.968
6.848	6.946	7.310	7.384	7.490	7.632	7.892	8.030	8.211	8.424	8.673

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 1
2.497	2.475	2.461	2.447	2.440	2.434	
18.17	18.23	18.34	23.25	23.72	24.62	
0.981	0.989	0.994	0.997	0.998	0.999	
8.904	9.147	9.395	9.693	9.946	10.205	

217 p-NITROPHENOL C6H5NO3

-1 33.4 7.149 139.11

	3.00	3.25	3.50
pHL			
RE			98.291
t	23.81	22.80	22.09
Z	0.016	0.019	0.023
pHS	5.349	5.436	5.515

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
81.358	65.835	46.641	41.010	34.896	28.725	24.031	20.344	16.691	8.923	8.165
21.52	21.09	18.34	18.25	18.16	18.09	20.52	20.49	20.47	18.17	18.17
0.028	0.034	0.049	0.056	0.066	0.080	0.096	0.113	0.138	0.263	0.288
5.599	5.694	5.851	5.910	5.984	6.075	6.161	6.241	6.339	6.681	6.734

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
7.237	6.238	4.073	3.803	3.490	3.182	2.867	2.748	2.643	2.565	2.518
18.16	18.16	24.96	24.97	24.98	24.99	18.10	18.10	18.11	18.12	18.13
0.326	0.379	0.587	0.630	0.688	0.757	0.850	0.888	0.925	0.953	0.973
6.810	6.910	7.273	7.351	7.462	7.611	7.867	8.012	8.200	8.418	8.668

8.75	9.00	9.25	9.50	9.75	10.00
2.489	2.470	2.458	2.445	2.439	2.434
18.17	18.23	18.34	23.25	23.72	24.62
0.984	0.991	0.995	0.997	0.999	0.999
8.902	9.146	9.394	9.693	9.946	10.205

(Ref.) : 3 , 1

218 NITROUS ACID HNO2

-1 74.6 3.220 47.01

	3.00	3.25	3.50
pHL			
RE	1.684	1.501	1.370
t	16.80	15.94	15.36
Z	0.625	0.702	0.770
pHS	3.404	3.554	3.706

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.268	1.192	1.175	1.136	1.107	1.088	1.087	1.077	1.070	1.067	1.065
14.94	14.65	13.52	13.39	13.29	13.24	14.36	14.33	14.31	13.27	13.26
0.833	0.888	0.901	0.933	0.958	0.975	0.976	0.986	0.992	0.995	0.997
3.878	4.076	4.138	4.324	4.539	4.772	4.782	5.019	5.263	5.516	5.760

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.063	1.063	1.062	1.062	1.062	1.062	1.062	1.062	1.062	1.062	1.062
13.26	13.26	16.26	16.26	16.27	16.27	13.24	13.24	13.25	13.25	13.25
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.008	6.257	6.511	6.761	7.010	7.260	7.507	7.757	8.007	8.257	8.507

8.75	9.00	9.25	9.50	9.75	10.00
1.062	1.062	1.062	1.062	1.062	1.062
13.26	13.28	13.31	15.34	15.43	15.58
1.000	1.000	1.000	1.000	1.000	1.000
8.757	9.007	9.257	9.510	9.760	10.010

(Ref.) : 2 , 7

219 OCTYLSULFONIC ACID C8H18O3S

-1 30.1 -2.000 194.30

	3.00	3.25	3.50
pHL			
RE	2.722	2.722	2.722
t	30.42	27.04	24.92
Z	1.000	1.000	1.000
pHS	3.332	3.536	3.742

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.721	2.720	2.736	2.736	2.734	2.732	2.728	2.725	2.723	2.739	2.738
23.55	22.71	19.94	19.49	19.22	19.06	21.96	21.87	21.82	19.16	19.15
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.962	4.196	4.200	4.426	4.664	4.910	4.938	5.185	5.434	5.662	5.910

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.736	2.733	2.722	2.720	2.718	2.715	2.740	2.738	2.736	2.734	2.738
19.14	19.13	26.87	26.87	26.86	26.85	19.09	19.10	19.11	19.12	19.14
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.159	6.409	6.720	6.969	7.219	7.469	7.659	7.909	8.159	8.409	8.662

8.75	9.00	9.25	9.50	9.75	10.00
2.735	2.733	2.729	2.720	2.715	2.709
19.18	19.26	19.40	24.94	25.56	26.77
1.000	1.000	1.000	1.000	1.000	1.000
8.912	9.163	9.415	9.722	9.979	10.240

(Ref.) : 3 , 12

220 OROTIC ACID C5H4N2O4

-1	33.1	2.803	156.10

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	2.988	2.817	2.697	2.611	2.551	2.560	2.527	2.504	2.489	2.485
t	27.50	24.97	23.31	22.17	21.44	18.89	18.52	18.28	18.14	20.76
Z	0.819	0.870	0.910	0.941	0.964	0.965	0.978	0.987	0.993	0.993
pHS	3.425	3.595	3.773	3.971	4.191	4.210	4.421	4.652	4.893	4.920

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
2.476	2.470	2.481	2.478	2.476	2.473	2.464	2.463	2.461	2.459	2.478
20.68	20.64	18.23	18.22	18.21	18.21	25.21	25.21	25.20	25.20	18.17
0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5.164	5.412	5.643	5.890	6.139	6.389	6.693	6.943	7.192	7.442	7.639

7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10
2.477	2.475	2.473	2.476	2.474	2.472	2.469	2.462	2.459	2.455	
18.17	18.18	18.19	18.21	18.25	18.31	18.42	23.39	23.87	24.79	
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
7.889	8.139	8.389	8.641	8.891	9.142	9.393	9.693	9.948	10.207	

221 OXALIC ACID (S) C2H2O4

-1	42.4	1.271	90.04
-2	77.0	4.266	

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	1.785	1.709	1.619	1.517	1.414	1.397	1.318	1.252	1.203	1.198
t	26.36	24.63	24.23	24.63	25.43	23.55	24.31	25.00	25.54	27.88
Z	1.095	1.159	1.244	1.353	1.481	1.513	1.629	1.738	1.828	1.832
pHS	3.213	3.434	3.651	3.871	4.094	4.146	4.348	4.564	4.794	4.808

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
1.166	1.145	1.137	1.130	1.126	1.123	1.116	1.115	1.114	1.112	1.121
28.25	28.50	26.52	26.61	26.66	26.69	32.97	32.98	32.98	32.97	26.68
1.895	1.937	1.964	1.979	1.988	1.993	1.996	1.998	1.999	1.999	2.000
5.040	5.280	5.535	5.775	6.021	6.270	6.527	6.775	7.025	7.274	7.519

7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 1
1.121	1.120	1.120	1.121	1.120	1.120	1.119	1.115	1.114	1.113	
26.69	26.70	26.71	26.71	26.73	26.76	26.82	31.07	31.25	31.57	
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	
7.769	8.019	8.269	8.519	8.769	9.019	9.269	9.524	9.774	10.024	

222 OXALOACETIC ACID C4H4O5

-1	28.0	2.555	132.07
-2	56.0	4.370	

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	2.924	2.698	2.492	2.291	2.100	2.069	1.932	1.816	1.727	1.715
t	33.32	30.94	29.88	29.68	30.04	27.15	27.67	28.21	28.66	31.99
Z	1.011	1.102	1.200	1.315	1.446	1.482	1.597	1.710	1.806	1.814
pHS	3.414	3.593	3.775	3.969	4.176	4.231	4.417	4.624	4.848	4.872

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
1.658	1.620	1.611	1.597	1.588	1.582	1.569	1.566	1.564	1.561	1.581
32.30	32.50	29.67	29.74	29.78	29.81	38.66	38.66	38.64	38.62	29.81
1.882	1.928	1.959	1.976	1.986	1.992	1.996	1.998	1.999	1.999	2.000
5.099	5.337	5.585	5.822	6.068	6.316	6.593	6.841	7.090	7.340	7.564

7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 12 , 1
1.580	1.579	1.577	1.580	1.578	1.577	1.575	1.565	1.563	1.560	
29.81	29.81	29.82	29.84	29.87	29.92	30.02	36.07	36.40	37.03	
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	
7.814	8.064	8.314	8.565	8.815	9.065	9.315	9.587	9.838	10.091	

223 PELARGONIC ACID C9H18O2

	-1	26.7	4.955		158.24		pHL	3.00	3.25	3.50
							RE	16.050	13.381	11.369
							t	28.51	26.84	25.71
							Z	0.182	0.219	0.259
							pHS	4.287	4.386	4.479

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
9.613	8.038	6.880	6.160	5.433	4.766	4.534	4.103	3.750	3.467	3.347
24.85	24.22	20.79	20.61	20.45	20.32	23.54	23.49	23.45	20.47	20.46
0.307	0.369	0.436	0.489	0.557	0.637	0.671	0.744	0.816	0.892	0.925
4.582	4.700	4.819	4.909	5.026	5.170	5.234	5.386	5.569	5.838	6.013

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.253	3.189	3.128	3.108	3.095	3.087	3.116	3.113	3.108	3.105	3.109
20.45	20.45	29.22	29.22	29.21	29.20	20.41	20.42	20.42	20.44	20.47
0.953	0.972	0.986	0.992	0.995	0.997	0.998	0.999	0.999	1.000	1.000
6.223	6.454	6.776	7.013	7.258	7.505	7.690	7.938	8.188	8.438	8.691

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 7
3.106	3.102	3.098	3.084	3.078	3.069	
20.53	20.62	20.80	27.20	28.05	29.79	
1.000	1.000	1.000	1.000	1.000	1.000	
8.941	9.192	9.444	9.762	10.020	10.287	

224 PERCHLORIC ACID (S) HClO4

	-1	69.8	-2.000		100.46		pHL	3.00	3.25	3.50
							RE	1.137	1.137	1.137
							t	19.06	17.12	16.01
							Z	1.000	1.000	1.000
							pHS	3.039	3.282	3.525

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.137	1.137	1.137	1.137	1.137	1.137	1.137	1.137	1.137	1.137	1.137
15.38	15.02	13.88	13.67	13.56	13.49	14.69	14.66	14.64	13.53	13.52
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.771	4.019	4.020	4.267	4.515	4.765	4.768	5.018	5.268	5.515	5.765

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.137	1.137	1.137	1.137	1.137	1.137	1.137	1.137	1.137	1.137	1.137
13.52	13.52	16.74	16.74	16.74	16.74	13.50	13.50	13.51	13.51	13.51
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.015	6.265	6.522	6.772	7.022	7.272	7.515	7.765	8.015	8.265	8.515

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 7 , 12
1.137	1.137	1.137	1.137	1.137	1.136	
13.52	13.54	13.57	15.76	15.85	16.03	
1.000	1.000	1.000	1.000	1.000	1.000	
8.765	9.015	9.265	9.521	9.771	10.022	

225 PERIODIC ACID HIO4

	-1	56.5	1.550		191.91		pHL	3.00	3.25	3.50
							RE	1.447	1.433	1.425
							t	20.93	18.81	17.55
							Z	0.976	0.986	0.992
							pHS	3.127	3.351	3.578

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.420	1.417	1.419	1.417	1.416	1.415	1.415	1.414	1.413	1.416	1.416
16.79	16.35	14.92	14.67	14.53	14.45	15.95	15.90	15.88	14.50	14.49
0.995	0.997	0.997	0.998	0.999	0.999	0.999	1.000	1.000	1.000	1.000
3.814	4.057	4.061	4.300	4.546	4.794	4.803	5.052	5.302	5.544	5.794

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.415	1.415	1.414	1.413	1.413	1.412	1.416	1.415	1.415	1.415	1.415
14.49	14.49	18.49	18.49	18.49	18.49	14.46	14.46	14.47	14.47	14.48
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.043	6.293	6.564	6.813	7.063	7.313	7.543	7.793	8.043	8.293	8.544

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 4
1.415	1.415	1.414	1.413	1.413	1.412	
14.49	14.52	14.56	17.30	17.45	17.71	
1.000	1.000	1.000	1.000	1.000	1.000	
8.794	9.044	9.294	9.561	9.812	10.064	

226 PERMANGANIC ACID HMnO4

-1	63.4	-2.000	119.90

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	1.255	1.255	1.255	1.255	1.255	1.256	1.256	1.256	1.256	1.255
t	19.92	17.86	16.67	15.98	15.58	14.32	14.10	13.97	13.90	15.23
Z	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
pHS	3.070	3.308	3.546	3.789	4.035	4.036	4.281	4.528	4.777	4.783

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
1.255	1.255	1.256	1.256	1.256	1.256	1.255	1.255	1.255	1.255	1.256
15.19	15.17	13.94	13.94	13.93	13.93	17.49	17.49	17.49	17.49	13.91
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5.033	5.282	5.528	5.777	6.027	6.277	6.540	6.790	7.040	7.290	7.527

7.75	8.00	8.25	8.50	8.75	9.00	9.25
1.256	1.256	1.256	1.256	1.256	1.256	1.255
13.91	13.92	13.92	13.92	13.94	13.96	13.99
1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.777	8.027	8.277	8.528	8.778	9.028	9.278

9.50	9.75	10.00	(Ref.) : 2 , 12
1.255	1.255	1.254	
16.41	16.53	16.74	
1.000	1.000	1.000	
9.538	9.789	10.040	

227 PEROXYSULFURIC ACID H2S2O8

-1	44.6	-2.000	194.13
-2	89.1	-1.000	

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	0.958	0.958	0.958	0.957	0.957	0.960	0.960	0.960	0.960	0.958
t	35.24	31.74	29.79	28.71	28.11	26.23	25.88	25.69	25.59	27.59
Z	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
pHS	2.987	3.242	3.496	3.748	3.999	3.999	4.250	4.501	4.751	4.750

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
0.957	0.957	0.960	0.960	0.959	0.959	0.956	0.955	0.955	0.954	0.960
27.53	27.50	25.65	25.64	25.64	25.64	31.01	31.00	31.00	31.00	25.60
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
5.000	5.250	5.501	5.751	6.001	6.251	6.499	6.749	6.999	7.249	7.502

7.75	8.00	8.25	8.50	8.75	9.00	9.25
0.960	0.960	0.959	0.960	0.960	0.959	0.959
25.61	25.61	25.62	25.62	25.64	25.67	25.71
2.000	2.000	2.000	2.000	2.000	2.000	2.000
7.752	8.001	8.251	8.501	8.751	9.001	9.251

9.50	9.75	10.00	(Ref.) : 2 , 12
0.956	0.955	0.955	
29.34	29.48	29.73	
2.000	2.000	2.000	
9.499	9.749	9.999	

228 PERRHENIC ACID HReO4

-1	56.7	0.000	251.20

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	1.409	1.409	1.409	1.408	1.408	1.410	1.410	1.410	1.409	1.409
t	21.02	18.82	17.53	16.77	16.32	14.90	14.65	14.51	14.43	15.92
Z	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
pHS	3.108	3.339	3.571	3.810	4.055	4.057	4.298	4.545	4.793	4.802

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
1.409	1.408	1.410	1.410	1.410	1.409	1.408	1.408	1.408	1.407	1.411
15.88	15.86	14.48	14.47	14.47	14.47	18.46	18.46	18.46	18.46	14.44
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5.051	5.301	5.544	5.793	6.043	6.293	6.563	6.813	7.063	7.313	7.543

7.75	8.00	8.25	8.50	8.75	9.00	9.25
1.410	1.410	1.410	1.410	1.410	1.409	1.409
14.44	14.45	14.46	14.46	14.47	14.50	14.54
1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.793	8.043	8.293	8.543	8.793	9.044	9.294

9.50	9.75	10.00	(Ref.) : 2 , 12
1.408	1.407	1.407	
17.27	17.42	17.68	
1.000	1.000	1.000	
9.560	9.811	10.063	

229 PHENOL C6H6O

	-1	34.4	9.998		94.11		pHL	3.00	3.25	3.50
							RE			
							t	24.19	23.31	22.69
							Z	0.001	0.001	0.001
							pHS	6.781	6.867	6.945

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
22.18	21.76	19.01	18.94	18.87	18.80	21.20	21.17	21.15	18.90	18.90
0.001	0.001	0.002	0.002	0.003	0.003	0.004	0.005	0.006	0.013	0.014
7.026	7.118	7.283	7.338	7.408	7.494	7.583	7.657	7.746	8.099	8.139

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
		50.561	46.612	41.437	35.408	18.542	17.040	15.112	12.921	8.407
18.90	18.90	25.48	25.49	25.50	25.52	18.96	18.97	18.99	19.02	19.17
0.016	0.019	0.044	0.047	0.053	0.063	0.121	0.132	0.149	0.174	0.271
8.197	8.272	8.650	8.687	8.740	8.813	9.122	9.164	9.224	9.305	9.547

8.75	9.00	9.25	9.50	9.75	10.00
7.457	6.419	5.417	4.083	3.612	3.199
19.23	19.34	19.51	24.78	25.39	26.52
0.306	0.356	0.424	0.566	0.642	0.727
9.620	9.717	9.839	10.086	10.222	10.392

(Ref.) : 3 , 7

230 PHENOXYACETIC ACID C8H8O3

	-1	27.8	3.171		152.15		pHL	3.00	3.25	3.50
							RE	4.040	3.718	3.484
							t	30.42	27.75	25.96
							Z	0.724	0.788	0.843
							pHS	3.558	3.710	3.868

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.304	3.172	3.178	3.104	3.051	3.016	3.007	2.987	2.974	2.988	2.983
24.69	23.85	20.76	20.35	20.07	19.90	23.05	22.96	22.90	20.02	20.00
0.891	0.929	0.934	0.957	0.974	0.984	0.986	0.992	0.995	0.997	0.998
4.048	4.255	4.284	4.479	4.700	4.937	4.970	5.211	5.457	5.684	5.930

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.979	2.974	2.959	2.957	2.954	2.951	2.981	2.979	2.977	2.974	2.978
19.99	19.98	28.40	28.39	28.38	28.37	19.95	19.95	19.96	19.97	20.00
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.178	6.428	6.743	6.993	7.242	7.492	7.678	7.928	8.178	8.428	8.680

8.75	9.00	9.25	9.50	9.75	10.00
2.976	2.972	2.968	2.956	2.950	2.943
20.05	20.14	20.30	26.40	27.16	28.69
1.000	1.000	1.000	1.000	1.000	1.000
8.931	9.182	9.434	9.748	10.006	10.270

(Ref.) : 11 , 1

231 PHENYLACETIC ACID C8H8O2

	-1	31.7	4.405		136.15		pHL	3.00	3.25	3.50
							RE	8.332	7.058	6.099
							t	25.69	24.22	23.21
							Z	0.298	0.353	0.410
							pHS	4.011	4.119	4.222

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.270	4.539	4.126	3.774	3.437	3.151	3.086	2.907	2.777	2.704	2.660
22.44	21.87	19.02	18.83	18.66	18.54	21.25	21.19	21.15	18.64	18.63
0.476	0.555	0.616	0.675	0.744	0.814	0.831	0.883	0.925	0.957	0.973
4.337	4.472	4.580	4.691	4.834	5.010	5.061	5.248	5.462	5.715	5.927

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.630	2.610	2.589	2.583	2.578	2.574	2.595	2.593	2.591	2.588	2.592
18.62	18.61	25.95	25.94	25.93	25.93	18.58	18.58	18.59	18.60	18.62
0.984	0.991	0.995	0.997	0.999	0.999	0.999	1.000	1.000	1.000	1.000
6.160	6.403	6.713	6.957	7.205	7.455	7.649	7.898	8.148	8.398	8.650

8.75	9.00	9.25	9.50	9.75	10.00
2.590	2.587	2.584	2.576	2.572	2.567
18.66	18.73	18.85	24.07	24.61	25.65
1.000	1.000	1.000	1.000	1.000	1.000
8.900	9.151	9.403	9.706	9.962	10.222

(Ref.) : 10 , 1

232 4-PHENYLBUTYRIC ACID C10H12O2 pHL 3.00 3.25 3.50
-1 24.7 4.757 164.20 RE 14,144 11,861 10,133
t 30,42 28,50 27,20
Z 0.225 0.270 0.317
pHS 4.203 4.305 4.402

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
8.629	7.289	6.458	5.816	5.184	4.624	4.457	4.098	3.822	3.641	3.544
26.22	25.50	21.82	21.60	21.41	21.27	24.78	24.71	24.67	21.43	21.42
0.373	0.444	0.507	0.565	0.636	0.717	0.743	0.811	0.872	0.925	0.951
4.510	4.636	4.743	4.843	4.971	5.129	5.189	5.358	5.556	5.811	6.005

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3,474	3,428	3,377	3,364	3,354	3,346	3,384	3,380	3,376	3,372	3,378
21,41	21,40	30,93	30,92	30,91	30,90	21,37	21,37	21,38	21,40	21,44
0.970	0.982	0.992	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.229	6.467	6.791	7.033	7.280	7.529	7.708	7.957	8.207	8.457	8.710

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 7
3,374	3,370	3,364	3,346	3,339	3,328	
21.50	21.62	21.83	28.87	29.94	32.19	
1.000	1.000	1.000	1.000	1.000	1.000	
8.961	9.212	9.465	9.790	10.050	10.320	

233 2-PHENYLPROPIONIC ACID C9H10O2 pHL 3.00 3.25 3.50
-1 26.5 2.237 150.20 RE 3,294 3,230 3,187
t 32.83 29.33 27.08
Z 0.942 0.962 0.975
pHS 3.417 3.604 3.797

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3,158	3,138	3,159	3,147	3,138	3,132	3,125	3,120	3,115	3,137	3,134
25,57	24,63	21,44	20,95	20,63	20,45	23,77	23,67	23,60	20,58	20,56
0.985	0.991	0.991	0.995	0.997	0.998	0.998	0.999	0.999	1.000	1.000
4.007	4.235	4.244	4.462	4.697	4.940	4.973	5.219	5.467	5.692	5.940

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3,132	3,128	3,111	3,109	3,107	3,103	3,136	3,135	3,132	3,129	3,134
20,54	20,54	29,39	29,38	29,37	29,36	20,50	20,50	20,51	20,53	20,56
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.189	6.439	6.757	7.007	7.256	7.506	7.689	7.939	8.189	8.439	8.692

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 3
3,131	3,127	3,123	3,108	3,102	3,093	
20,62	20,72	20,90	27,35	28,22	30,01	
1.000	1.000	1.000	1.000	1.000	1.000	
8.943	9.194	9.446	9.765	10.023	10.290	

234 3-PHENYLPROPIONIC ACID C9H10O2 pHL 3.00 3.25 3.50
-1 26.5 4.664 150.20 RE 12,233 10,283 8,810
t 28,94 27,17 25,96
Z 0.243 0.290 0.339
pHS 4.151 4.255 4.353

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7,528	6,390	5,693	5,148	4,614	4,144	4,013	3,714	3,488	3,344	3,265
25,05	24,38	20,95	20,74	20,56	20,42	23,69	23,62	23,58	20,57	20,55
0.399	0.472	0.536	0.594	0.665	0.744	0.768	0.832	0.888	0.935	0.958
4.462	4.590	4.698	4.801	4.932	5.094	5.152	5.326	5.528	5.783	5.982

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3,209	3,173	3,133	3,121	3,113	3,107	3,139	3,136	3,133	3,129	3,134
20,54	20,54	29,38	29,38	29,37	29,36	20,50	20,50	20,51	20,53	20,56
0.974	0.985	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000
6.208	6.448	6.768	7.011	7.258	7.507	7.691	7.940	8.189	8.439	8.692

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
3,131	3,127	3,123	3,108	3,102	3,093	
20,62	20,72	20,90	27,35	28,22	30,01	
1.000	1.000	1.000	1.000	1.000	1.000	
8.943	9.194	9.446	9.765	10.023	10.290	

235	PHOSPHORIC ACID (S)				H3P04		pHL	3,00	3,25	3,50
	-1	35,1	2,120		98,00		RE	2,449	2,401	2,369
	-2	61,5	7,470				t	27,20	24,38	22,60
	-3	71,5	12,360				Z	0,944	0,964	0,977
							pHS	3,313	3,510	3,711

3,75	4,00	4,00	4,25	4,50	4,75	4,75	5,00	5,25	5,50	5,75
2,348	2,333	2,344	2,336	2,328	2,322	2,319	2,312	2,302	2,300	2,278
21,45	20,74	18,38	18,01	17,79	17,68	20,16	20,13	20,18	18,06	18,31
0,986	0,992	0,993	0,996	0,999	1,002	1,002	1,005	1,010	1,019	1,034
3,929	4,162	4,170	4,394	4,633	4,878	4,903	5,150	5,398	5,645	5,893

6,00	6,25	6,50	6,75	7,00	7,25	7,50	7,75	8,00	8,25	8,50
2,241	2,183	2,037	1,936	1,825	1,715	1,619	1,559	1,510	1,475	1,456
18,74	19,42	28,10	29,47	30,97	32,47	26,37	27,12	27,72	28,15	28,43
1,058	1,099	1,209	1,300	1,411	1,536	1,686	1,775	1,852	1,909	1,947
6,141	6,389	6,770	6,975	7,183	7,397	7,665	7,860	8,080	8,314	8,564

8,75	9,00	9,25	9,50	9,75	10,00	(Ref.) : 11 , 4
1,443	1,434	1,429	1,419	1,415	1,412	
28,62	28,76	28,90	34,40	34,74	35,32	
1,969	1,983	1,991	1,997	2,002	2,007	
8,806	9,053	9,302	9,568	9,818	10,070	

236	PHOSPHOROUS ACID				H3P03		pHL	3,00	3,25	3,50
	-1	40,0	2,000		82,00		RE	2,120	2,083	2,059
	-2	65,4	7,000				t	25,15	22,56	20,95
							Z	0,952	0,970	0,982
							pHS	3,262	3,465	3,673

3,75	4,00	4,00	4,25	4,50	4,75	4,75	5,00	5,25	5,50	5,75
2,043	2,032	2,040	2,032	2,026	2,018	2,016	2,006	1,990	1,972	1,933
19,94	19,33	17,26	16,95	16,79	16,74	18,91	18,99	19,19	17,61	18,23
0,990	0,995	0,995	0,999	1,003	1,008	1,009	1,016	1,030	1,054	1,093
3,895	4,130	4,138	4,366	4,607	4,853	4,874	5,122	5,371	5,638	5,884

6,00	6,25	6,50	6,75	7,00	7,25	7,50	7,75	8,00	8,25	8,50
1,875	1,796	1,648	1,573	1,501	1,440	1,407	1,380	1,361	1,349	1,344
19,17	20,44	29,42	30,83	32,18	33,32	26,94	27,39	27,70	27,90	28,02
1,152	1,240	1,423	1,532	1,648	1,756	1,848	1,903	1,941	1,966	1,980
6,127	6,368	6,730	6,918	7,123	7,344	7,596	7,815	8,051	8,295	8,546

8,75	9,00	9,25	9,50	9,75	10,00	(Ref.) : 11 , 6
1,339	1,336	1,334	1,327	1,324	1,322	
28,11	28,19	28,28	33,38	33,63	34,08	
1,989	1,994	1,996	1,998	1,999	1,999	
8,793	9,042	9,292	9,555	9,805	10,056	

237	PHTHALIC ACID				C8H604		pHL	3,00	3,25	3,50
	-1	28,1	2,950		166,13		RE	3,608	3,360	3,173
	-2	52,9	5,408				t	30,89	28,17	26,48
							Z	0,807	0,869	0,924
							pHS	3,499	3,661	3,831

3,75	4,00	4,00	4,25	4,50	4,75	4,75	5,00	5,25	5,50	5,75
3,013	2,866	2,857	2,722	2,565	2,390	2,353	2,186	2,033	1,903	1,829
25,50	25,19	22,20	22,54	23,34	24,50	28,03	29,31	30,55	28,70	29,29
0,977	1,034	1,047	1,108	1,190	1,297	1,318	1,441	1,572	1,721	1,805
4,022	4,236	4,278	4,481	4,700	4,925	4,969	5,183	5,403	5,681	5,879

6,00	6,25	6,50	6,75	7,00	7,25	7,50	7,75	8,00	8,25	8,50
1,772	1,733	1,695	1,681	1,671	1,664	1,686	1,683	1,681	1,679	1,682
29,75	30,07	39,66	39,76	39,81	39,82	30,47	30,49	30,50	30,51	30,54
1,874	1,923	1,958	1,975	1,986	1,992	1,995	1,997	1,998	1,999	2,000
6,101	6,337	6,625	6,862	7,106	7,354	7,576	7,825	8,074	8,324	8,575

8,75	9,00	9,25	9,50	9,75	10,00	(Ref.) : 10 , 1
1,680	1,678	1,675	1,665	1,661	1,658	
30,57	30,62	30,73	37,18	37,56	38,27	
2,000	2,000	2,000	2,000	2,000	2,000	
8,825	9,075	9,325	9,600	9,852	10,105	

238 PICRIC ACID C6H3N307

-1	31.5	0.708	229.11

	pHL	3.00	3.25	3.50
	RE	2.601	2.598	2.597
	t	29.50	26.24	24.20
	Z	0.998	0.999	0.999
	pHS	3.317	3.522	3.729

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.596	2.594	2.609	2.608	2.606	2.604	2.601	2.598	2.596	2.611	2.609
22.90	22.09	19.45	19.02	18.76	18.60	21.37	21.29	21.24	18.71	18.69
0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.950	4.184	4.189	4.415	4.654	4.900	4.927	5.174	5.423	5.651	5.900

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.607	2.605	2.595	2.593	2.592	2.589	2.611	2.610	2.608	2.605	2.609
18.68	18.68	26.06	26.05	26.05	26.04	18.64	18.54	18.65	18.66	18.68
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.149	6.399	6.707	6.956	7.206	7.456	7.649	7.899	8.149	8.399	8.651

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 7
2.607	2.605	2.602	2.593	2.589	2.584	
18.72	18.79	18.92	24.17	24.72	25.78	
1.000	1.000	1.000	1.000	1.000	1.000	
8.902	9.153	9.404	9.708	9.964	10.224	

239 PIMELIC ACID C7H1204

-1	24.0	4.509	160.17
-2	49.9	5.312	

	pHL	3.00	3.25	3.50
	RE	10.544	8.738	7.364
	t	32.34	30.57	29.52
	Z	0.313	0.379	0.452
	pHS	4.080	4.184	4.283

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.166	5.095	4.412	3.882	3.359	2.892	2.764	2.458	2.215	2.031	1.947
28.90	28.72	25.48	25.80	26.34	27.10	31.04	31.83	32.63	30.12	30.50
0.542	0.660	0.773	0.882	1.026	1.199	1.254	1.418	1.580	1.750	1.830
4.392	4.519	4.629	4.731	4.861	5.020	5.074	5.239	5.433	5.704	5.892

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.884	1.842	1.802	1.788	1.779	1.772	1.797	1.794	1.792	1.789	1.793
30.80	31.00	41.15	41.20	41.22	41.21	31.25	31.26	31.26	31.27	31.30
1.894	1.937	1.967	1.981	1.989	1.994	1.996	1.998	1.999	1.999	2.000
6.111	6.347	6.637	6.875	7.120	7.368	7.586	7.835	8.084	8.334	8.585

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 1
1.791	1.788	1.785	1.773	1.769	1.765	
31.34	31.40	31.51	38.41	38.85	39.66	
2.000	2.000	2.000	2.000	2.000	2.000	
8.835	9.085	9.336	9.614	9.866	10.120	

240 PROPIONIC ACID (S) C3H602

-1	37.1	4.874	74.08

	pHL	3.00	3.25	3.50
	RE	11.190	9.352	7.973
	t	22.76	21.71	20.98
	Z	0.187	0.224	0.264
	pHS	4.218	4.316	4.407

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.766	5.675	4.747	4.278	3.796	3.344	3.185	2.895	2.653	2.439	2.359
20.41	19.97	17.50	17.38	17.27	17.17	19.45	19.41	19.37	17.24	17.23
0.312	0.373	0.450	0.501	0.566	0.645	0.678	0.748	0.818	0.897	0.928
4.507	4.624	4.760	4.846	4.959	5.100	5.164	5.312	5.491	5.775	5.945

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.296	2.253	2.217	2.203	2.195	2.189	2.201	2.198	2.196	2.194	2.196
17.22	17.22	23.43	23.43	23.43	23.42	17.18	17.19	17.19	17.20	17.22
0.954	0.972	0.986	0.992	0.995	0.997	0.998	0.999	0.999	1.000	1.000
6.153	6.383	6.688	6.922	7.166	7.413	7.618	7.866	8.116	8.366	8.617

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 1
2.195	2.193	2.191	2.186	2.184	2.180	
17.24	17.30	17.39	21.74	22.11	22.79	
1.000	1.000	1.000	1.000	1.000	1.000	
8.867	9.118	9.369	9.661	9.914	10.171	

241 3-PROPYLGLUTARIC ACID C8H14O4 174.20

-1	23.5	4.312	
-2	47.0	5.386	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	9.319	7.837	6.702
t	32.96	30.96	29.74
Z	0.365	0.437	0.513
pHS	4.000	4.109	4.215

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.710	4.824	4.360	3.883	3.416	2.998	2.890	2.599	2.363	2.181	2.089
29.00	28.75	25.31	25.63	26.23	27.11	31.24	32.21	33.18	30.66	31.13
0.606	0.724	0.812	0.918	1.053	1.212	1.257	1.410	1.564	1.729	1.813
4.333	4.472	4.571	4.688	4.835	5.009	5.062	5.241	5.442	5.713	5.904

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.019	1.972	1.926	1.910	1.899	1.891	1.920	1.917	1.914	1.911	1.915
31.50	31.75	42.61	42.68	42.70	42.70	32.08	32.09	32.10	32.11	32.15
1.881	1.928	1.962	1.978	1.987	1.993	1.996	1.998	1.999	1.999	2.000
6.123	6.359	6.652	6.890	7.135	7.383	7.597	7.846	8.095	8.345	8.596

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 12 , 7
1.912	1.909	1.906	1.892	1.887	1.882	
32.18	32.25	32.38	39.77	40.27	41.20	
2.000	2.000	2.000	2.000	2.000	2.000	
8.846	9.096	9.347	9.629	9.882	10.136	

242 PROPYLMALONIC ACID C6H10O4 146.14

-1	26.0	2.971	
-2	52.0	5.845	

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	3.937	3.683	3.496
t	32.46	29.45	27.50
Z	0.799	0.857	0.905
pHS	3.525	3.687	3.855

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.345	3.219	3.225	3.120	2.998	2.846	2.809	2.627	2.427	2.188	2.060
26.22	25.52	22.25	22.15	22.43	23.12	26.72	27.78	29.03	27.59	28.42
0.947	0.986	0.992	1.028	1.072	1.134	1.148	1.234	1.345	1.522	1.627
4.045	4.258	4.290	4.494	4.719	4.952	4.998	5.223	5.448	5.753	5.934

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.947	1.859	1.776	1.743	1.721	1.706	1.724	1.719	1.715	1.711	1.714
29.16	29.74	39.75	39.96	40.08	40.15	30.65	30.68	30.70	30.72	30.75
1.731	1.820	1.901	1.938	1.963	1.979	1.987	1.993	1.996	1.998	1.999
6.138	6.361	6.660	6.880	7.117	7.361	7.583	7.829	8.078	8.327	8.578

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 12 , 2
1.712	1.709	1.707	1.696	1.692	1.689	
30.79	30.84	30.95	37.54	37.93	38.67	
1.999	2.000	2.000	2.000	2.000	2.000	
8.828	9.078	9.328	9.604	9.856	10.109	

243 PROPYLSULFONIC ACID C3H8O3S 124.15

-1	38.5	-2.000	

	3.00	3.25	3.50
pHL	2.104	2.104	2.104
RE	26.01	23.17	21.44
t	1.000	1.000	1.000
Z	3.241	3.455	3.670
pHS			

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.104	2.103	2.111	2.111	2.110	2.109	2.107	2.106	2.104	2.113	2.112
20.35	19.69	17.55	17.20	16.99	16.87	19.11	19.04	19.00	16.94	16.93
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.897	4.135	4.139	4.370	4.612	4.858	4.879	5.127	5.376	5.610	5.859

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.111	2.110	2.104	2.103	2.102	2.101	2.113	2.112	2.111	2.110	2.112
16.93	16.92	22.90	22.90	22.90	22.89	16.89	16.89	16.90	16.91	16.92
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.108	6.358	6.653	6.902	7.152	7.402	7.608	7.858	8.108	8.358	8.609

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 12
2.111	2.109	2.108	2.103	2.101	2.098	
16.95	16.99	17.08	21.26	21.59	22.22	
1.000	1.000	1.000	1.000	1.000	1.000	
8.860	9.110	9.361	9.651	9.904	10.160	

244 PYRAZOLE-2,3-DICARBOXYLIC ACID C5H5N2O4 157.11

-1	33.8	1.000	
-2	56.0	4.228	

pHL	3.00	3.25	3.50
RE	2.258	2.180	2.086
t	30.82	28.74	28.14
Z	1.126	1.194	1.283
pHS	3.286	3.495	3.702

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.980	1.871	1.866	1.782	1.712	1.660	1.652	1.618	1.596	1.597	1.589
28.43	29.23	26.53	27.30	28.00	28.56	31.83	32.22	32.46	29.65	29.73
1.396	1.525	1.549	1.663	1.767	1.850	1.855	1.911	1.947	1.969	1.982
3.916	4.137	4.176	4.380	4.600	4.833	4.853	5.088	5.331	5.576	5.819

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.584	1.580	1.568	1.566	1.563	1.560	1.581	1.580	1.579	1.577	1.580
29.78	29.81	38.66	38.65	38.64	38.62	29.81	29.81	29.81	29.82	29.84
1.990	1.994	1.997	1.998	1.999	1.999	2.000	2.000	2.000	2.000	2.000
6.066	6.315	6.591	6.840	7.090	7.339	7.564	7.814	8.064	8.314	8.565

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10
1.578	1.577	1.575	1.565	1.563	1.560	
29.87	29.92	30.02	36.07	36.40	37.03	
2.000	2.000	2.000	2.000	2.000	2.000	
8.815	9.065	9.315	9.587	9.838	10.091	

245 PYROPHOSPHORIC ACID H4P2O7 177.98

-1	24.9	1.520	
-2	57.9	2.360	
-3	75.3	6.750	
-4	88.8	9.290	

pHL	3.00	3.25	3.50
RE	1.604	1.568	1.546
t	42.47	38.28	35.77
Z	1.895	1.935	1.962
pHS	3.163	3.379	3.601

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.531	1.521	1.533	1.527	1.522	1.516	1.511	1.504	1.493	1.492	1.471
34.26	33.38	30.38	29.92	29.70	29.66	32.88	33.02	33.36	31.06	32.00
1.979	1.990	1.991	1.999	2.007	2.018	2.018	2.035	2.062	2.108	2.178
3.834	4.075	4.080	4.317	4.562	4.810	4.822	5.070	5.319	5.576	5.822

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.441	1.405	1.350	1.319	1.292	1.272	1.286	1.275	1.265	1.253	1.245
33.32	34.94	46.74	48.38	49.73	50.78	41.24	41.98	42.87	44.05	45.65
2.279	2.408	2.579	2.705	2.814	2.901	2.971	3.034	3.106	3.198	3.321
6.067	6.312	6.605	6.831	7.066	7.308	7.552	7.796	8.043	8.292	8.547

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) . 11 , 4
1.230	1.215	1.201	1.174	1.164	1.157	
47.45	49.26	50.91	60.49	61.66	62.82	
3.463	3.609	3.737	3.835	3.900	3.942	
8.793	9.040	9.288	9.544	9.792	10.041	

246 PYRUVIC ACID C3H4O3 88.06

-1	42.3	2.490	

pHL	3.00	3.25	3.50
RE	2.171	2.078	2.016
t	23.90	21.67	20.25
Z	0.876	0.916	0.945
pHS	3.301	3.489	3.683

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.973	1.946	1.951	1.935	1.925	1.918	1.917	1.913	1.910	1.916	1.914
19.31	18.73	16.78	16.47	16.28	16.18	18.20	18.14	18.11	16.24	16.23
0.965	0.979	0.980	0.988	0.993	0.996	0.996	0.998	0.999	0.999	1.000
3.896	4.125	4.139	4.361	4.599	4.843	4.862	5.108	5.357	5.593	5.841

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.913	1.912	1.908	1.907	1.906	1.905	1.915	1.914	1.913	1.912	1.914
16.23	16.23	21.65	21.64	21.64	21.64	16.19	16.20	16.20	16.21	16.22
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.091	6.341	6.629	6.879	7.129	7.379	7.591	7.841	8.091	8.341	8.592

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 7
1.913	1.912	1.910	1.907	1.906	1.903	
16.24	16.28	16.35	20.12	20.38	20.88	
1.000	1.000	1.000	1.000	1.000	1.000	
8.842	9.092	9.343	9.627	9.879	10.134	

247 SACCHARIN C7H5NO3S

-1	31.3	2.432	183.20

	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
RE	2.874	2.783	2.722	2.679	2.651	2.665	2.648	2.637	2.629	2.625	2.620	2.615	2.630	2.628
t	29.06	26.12	24.23	22.96	22.17	19.49	19.08	18.82	18.67	21.45	21.37	21.32	18.77	18.75
Z	0.906	0.937	0.958	0.974	0.984	0.985	0.991	0.995	0.997	0.997	0.998	0.999	0.999	1.000
pHS	3.381	3.566	3.757	3.966	4.194	4.205	4.424	4.659	4.903	4.931	5.176	5.425	5.654	5.902

	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
	2.625	2.623	2.612	2.611	2.609	2.607	2.629	2.627	2.626	2.623	2.627
	18.74	18.74	26.17	26.16	26.16	26.15	18.70	18.71	18.71	18.73	18.75
	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	6.151	6.401	6.709	6.958	7.208	7.458	7.651	7.901	8.151	8.401	8.653

	8.75	9.00	9.25	9.50	9.75	10.00
	8.75	9.00	9.25	9.50	9.75	10.00
	2.625	2.622	2.619	2.610	2.607	2.601
	18.79	18.86	18.98	24.28	24.83	25.91
	1.000	1.000	1.000	1.000	1.000	1.000
	8.903	9.154	9.406	9.710	9.966	10.226

(Ref.) : 3

248 SALICYLIC ACID C7H6O3

-1	35.4	3.107	138.12

	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
RE	3.155	2.895	2.708	2.565	2.461	2.460	2.403	2.363	2.336	2.332	2.317	2.307	2.314	2.310
t	25.79	23.67	22.26	21.27	20.61	18.22	17.89	17.68	17.55	19.99	19.92	19.88	17.63	17.62
Z	0.721	0.787	0.843	0.891	0.930	0.935	0.958	0.974	0.985	0.986	0.992	0.995	0.997	0.998
pHS	3.485	3.641	3.802	3.985	4.193	4.226	4.423	4.646	4.884	4.910	5.151	5.397	5.631	5.877

	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
	2.308	2.305	2.297	2.296	2.294	2.292	2.308	2.307	2.306	2.304	2.307
	17.61	17.61	24.14	24.14	24.13	24.13	17.57	17.58	17.58	17.59	17.61
	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	6.125	6.375	6.675	6.925	7.174	7.424	7.625	7.875	8.125	8.375	8.626

	8.75	9.00	9.25	9.50	9.75	10.00
	8.75	9.00	9.25	9.50	9.75	10.00
	2.305	2.304	2.301	2.296	2.293	2.289
	17.64	17.70	17.79	22.39	22.80	23.57
	1.000	1.000	1.000	1.000	1.000	1.000
	8.877	9.127	9.379	9.674	9.928	10.186

(Ref.) : 10 , 1

249 SEBACIC ACID C10H18O4

-1	20.7	4.530	202.25
-2	44.9	5.380	

	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
RE	12.173	10.107	8.526	7.143	5.907	5.173	4.540	3.919	3.364	3.206	2.839	2.545	2.318	2.212
t	36.02	33.79	32.42	31.57	31.21	27.33	27.58	28.05	28.74	33.18	33.91	34.65	31.68	32.04
Z	0.315	0.380	0.452	0.541	0.657	0.759	0.867	1.008	1.177	1.232	1.394	1.556	1.731	1.815
pHS	4.111	4.214	4.314	4.425	4.553	4.655	4.760	4.892	5.051	5.107	5.272	5.464	5.733	5.918

	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
	2.132	2.079	2.026	2.008	1.996	1.987	2.020	2.016	2.013	2.009	2.014
	32.33	32.52	43.90	43.94	43.95	43.93	32.77	32.78	32.79	32.79	32.83
	1.883	1.930	1.963	1.978	1.988	1.993	1.996	1.998	1.999	1.999	2.000
	6.135	6.368	6.665	6.902	7.147	7.395	7.606	7.854	8.104	8.354	8.605

	8.75	9.00	9.25	9.50	9.75	10.00
	8.75	9.00	9.25	9.50	9.75	10.00
	2.011	2.008	2.004	1.988	1.983	1.978
	32.87	32.95	33.09	40.88	41.43	42.48
	2.000	2.000	2 000	2.000	2.000	2.000
	8.855	9.105	9.356	9.642	9.894	10.149

(Ref.) : 10 , 12

250 SELENIC ACID H2SeO4

	-1	41.0	0.000			144.97		pHL	3.00	3.25	3.50
	-2	80.5	2.050					RE	1.100	1.085	1.077
								t	36.21	32.80	30.84
								Z	1.933	1.961	1.977
								pHS	3.038	3.278	3.521
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75	
1.072	1.068	1.073	1.071	1.070	1.069	1.067	1.066	1.065	1.069	1.069	
29.72	29.09	26.99	26.63	26.42	26.31	28.54	28.48	28.45	26.39	26.38	
1.987	1.993	1.993	1.996	1.998	1.999	1.999	1.999	2.000	2.000	2.000	
3.768	4.016	4.017	4.265	4.514	4.763	4.765	5.015	5.264	5.513	5.763	
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	
1.069	1.068	1.063	1.063	1.062	1.061	1.069	1.069	1.069	1.068	1.069	
26.38	26.38	32.36	32.35	32.35	32.34	26.34	26.34	26.35	26.36	26.36	
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	
6.013	6.263	6.516	6.766	7.016	7.266	7.513	7.763	8.013	8.263	8.513	
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 4					
1.069	1.068	1.068	1.064	1.063	1.062						
26.38	26.41	26.46	30.51	30.68	30.97						
2.000	2.000	2.000	2.000	2.000	2.000						
8.763	9.013	9.263	9.516	9.766	10.016						

251 SELENIOUS ACID H2SeO3

	-1	41.2	2.620			128.97		pHL	3.00	3.25	3.50
	-2	60.5	8.450					RE	2.301	2.184	2.105
								t	24.12	21.93	20.52
								Z	0.848	0.895	0.929
								pHS	3.331	3.512	3.701
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75	
2.049	2.012	2.018	1.997	1.983	1.974	1.973	1.967	1.963	1.968	1.966	
19.58	18.99	16.98	16.67	16.48	16.37	18.45	18.40	18.37	16.47	16.48	
0.955	0.973	0.974	0.984	0.991	0.995	0.995	0.998	0.999	1.001	1.003	
3.908	4.135	4.152	4.370	4.605	4.849	4.869	5.114	5.363	5.599	5.848	
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	
1.963	1.958	1.946	1.935	1.915	1.885	1.847	1.790	1.723	1.653	1.587	
16.52	16.59	22.41	22.72	23.24	24.07	19.31	20.67	22.28	23.96	25.64	
1.006	1.010	1.020	1.035	1.061	1.104	1.180	1.272	1.390	1.523	1.667	
6.097	6.347	6.648	6.897	7.145	7.393	7.660	7.889	8.117	8.348	8.607	
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) 11					
1.541	1.506	1.482	1.460	1.449	1.442						
26.78	27.66	28.30	34.15	34.66	35.32						
1.772	1.854	1.912	1.950	1.971	1.984						
8.832	9.068	9.311	9.577	9.824	10.075						

252 SELENOCYANIC ACID HSeCN

	-1	67.1	0.000			105.99		pHL	3.00	3.25	3.50
								RE	1.185	1.184	1.184
								t	19.40	17.41	16.27
								Z	0.999	1.000	1.000
								pHS	3.052	3.293	3.534
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75	
1.184	1.184	1.185	1.184	1.184	1.184	1.184	1.184	1.184	1.185	1.185	
15.62	15.24	14.05	13.84	13.72	13.66	14.91	14.87	14.85	13.69	13.69	
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
3.778	4.026	4.027	4.272	4.521	4.770	4.774	5.024	5.274	5.520	5.770	
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	
1.184	1.184	1.184	1.184	1.184	1.184	1.185	1.185	1.184	1.184	1.185	
13.69	13.69	17.04	17.04	17.04	17.04	13.66	13.66	13.67	13.67	13.67	
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
6.020	6.270	6.529	6.779	7.029	7.279	7.520	7.770	8.020	8.270	8.520	
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 12					
1.184	1.184	1.184	1.184	1.184	1.183						
13.69	13.71	13.74	16.02	16.12	16.31						
1.000	1.000	1.000	1.000	1.000	1.000						
8.770	9.020	9.270	9.528	9.778	10.029						

253 SORBIC ACID — C6H8O2, 112.13

-1 33.4 4.770

pHL	3.00	3.25	3.50
RE	11.103	9.298	7.942
t	24.46	23.21	22.35
Z	0.210	0.252	0.296
pHS	4.177	4.277	4.372

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.758	5.696	4.888	4.413	3.933	3.494	3.356	3.074	2.847	2.671	2.595
21.68	21.18	18.45	18.30	18.16	18.06	20.61	20.56	20.52	18.15	18.14
0.349	0.415	0.489	0.543	0.611	0.690	0.719	0.787	0.852	0.915	0.943
4.475	4.596	4.722	4.815	4.935	5.085	5.146	5.304	5.493	5.766	5.949

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.538	2.499	2.465	2.454	2.446	2.440	2.457	2.455	2.453	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13
0.964	0.979	0.990	0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000
6.165	6.400	6.709	6.947	7.193	7.441	7.639	7.888	8.137	8.387	8.639

8.75	9.00	9.25	9.50	9.75	10.00
2.451	2.449	2.446	2.439	2.436	2.432
18.16	18.22	18.33	23.25	23.72	24.62
1.000	1.000	1.000	1.000	1.000	1.000
8.889	9.140	9.391	9.691	9.945	10.204

(Ref.) , 3

254 SUBERIC ACID — C8H14O4, 174.20

-1 22.5 4.517

-2 47.2 5.403

pHL	3.00	3.25	3.50
RE	11.348	9.435	7.974
t	33.79	31.79	30.58
Z	0.311	0.375	0.446
pHS	4.095	4.199	4.299

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.697	5.554	4.857	4.276	3.703	3.188	3.042	2.698	2.420	2.199	2.099
29.83	29.55	26.00	26.27	26.78	27.54	31.72	32.54	33.37	30.75	31.16
0.533	0.646	0.749	0.854	0.991	1.158	1.213	1.373	1.537	1.718	1.804
4.409	4.538	4.643	4.748	4.880	5.041	5.096	5.262	5.454	5.726	5.910

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.022	1.970	1.920	1.903	1.891	1.883	1.911	1.908	1.905	1.902	1.906
31.50	31.72	42.52	42.58	42.60	42.60	32.02	32.03	32.04	32.05	32.08
1.875	1.925	1.960	1.977	1.987	1.992	1.995	1.997	1.999	1.999	2.000
6.126	6.359	6.654	6.890	7.134	7.382	7.596	7.845	8.094	8.344	8.595

8.75	9.00	9.25	9.50	9.75	10.00
1.903	1.900	1.897	1.883	1.879	1.874
32.12	32.19	32.32	39.67	40.16	41.09
2.000	2.000	2.000	2.000	2.000	2.000
8.845	9.096	9.346	9.628	9.880	10.135

(Ref.) · 10 , 7

255 SUCCINIC ACID (S) — C4H6O4, 118.09

-1 33.0 4.207

-2 60.9 5.638

pHL	3.00	3.25	3.50
RE	6.629	5.619	4.856
t	25.62	24.26	23.41
Z	0.363	0.430	0.500
pHS	3.914	4.025	4.133

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.193	3.604	3.280	2.972	2.667	2.385	2.316	2.104	1.916	1.728	1.643
22.86	22.62	20.16	20.38	20.86	21.69	24.71	25.82	27.11	26.16	26.93
0.583	0.683	0.761	0.846	0.954	1.082	1.118	1.251	1.399	1.600	1.702
4.254	4.397	4.504	4.625	4.779	4.962	5.015	5.201	5.407	5.704	5.885

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.571	1.520	1.474	1.455	1.443	1.435	1.448	1.445	1.443	1.441	1.443
27.60	28.09	36.49	36.67	36.78	36.84	28.82	28.84	28.86	28.88	28.89
1.797	1.871	1.929	1.957	1.975	1.986	1.992	1.995	1.997	1.998	1.999
6.095	6.323	6.608	6.837	7.078	7.324	7.555	7.803	8.052	8.301	8.552

8.75	9.00	9.25	9.50	9.75	10.00
1.441	1.440	1.439	1.431	1.429	1.426
28.92	28.97	29.05	34.56	34.84	35.36
2.000	2.000	2.000	2.000	2.000	2.000
8.802	9.052	9.302	9.569	9.820	10.071

(Ref.) 10 , 1

256 SULFAMIC ACID (S) HSO3NH2

	-1	50.3	-2.000		97.09		pHL	3.00	3.25	3.50
							RE	1.594	1.594	1.594
							t	22.36	19.98	18.57
							Z	1.000	1.000	1.000
							pHS	3.147	3.373	3.600

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.594	1.593	1.597	1.597	1.596	1.596	1.595	1.595	1.594	1.598	1.597
17.72	17.22	15.61	15.33	15.17	15.08	16.77	16.72	16.69	15.13	15.12
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.835	4.078	4.080	4.318	4.563	4.811	4.824	5.073	5.322	5.562	5.812

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.597	1.596	1.594	1.594	1.593	1.592	1.588	1.597	1.597	1.596	1.597
15.12	15.12	19.64	19.64	19.64	19.64	15.09	15.09	15.10	15.11	15.11
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.061	6.311	6.589	6.838	7.088	7.338	7.561	7.811	8.061	8.311	8.562

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 12
1.597	1.596	1.595	1.594	1.593	1.591	
15.13	15.16	15.21	18.32	18.50	18.84	
1.000	1.000	1.000	1.000	1.000	1.000	
8.812	9.062	9.313	9.586	9.837	10.090	

257 SULFANILIC ACID C6H7NO3S

	-1	33.7	3.227		173.19		pHL	3.00	3.25	3.50
							RE	3.489	3.175	2.946
							t	26.44	24.32	22.89
							Z	0.685	0.754	0.814
							pHS	3.532	3.681	3.835

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.768	2.636	2.630	2.558	2.505	2.471	2.465	2.445	2.432	2.439	2.434
21.88	21.20	18.67	18.34	18.11	17.98	20.55	20.47	20.43	18.07	18.05
0.868	0.913	0.920	0.947	0.967	0.981	0.982	0.990	0.994	0.996	0.998
4.011	4.214	4.252	4.443	4.661	4.896	4.925	5.164	5.410	5.642	5.888

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.431	2.428	2.419	2.417	2.415	2.413	2.431	2.430	2.429	2.427	2.430
18.05	18.04	24.92	24.91	24.91	24.90	18.01	18.01	18.02	18.03	18.05
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.136	6.385	6.688	6.938	7.188	7.437	7.635	7.885	8.135	8.385	8.637

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 10 , 1
2.428	2.426	2.423	2.417	2.413	2.409	
18.08	18.14	18.25	23.11	23.57	24.45	
1.000	1.000	1.000	1.000	1.000	1.000	
8.887	9.138	9.389	9.688	9.943	10.201	

258 m-SULFANILIC ACID C6H7NO3S

	-1	33.4	3.740		173.19		pHL	3.00	3.25	3.50
							RE	4.748	4.158	3.717
							t	25.68	23.95	22.77
							Z	0.503	0.576	0.646
							pHS	3.717	3.844	3.971

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.350	3.049	2.973	2.815	2.684	2.589	2.576	2.521	2.486	2.480	2.468
21.90	21.28	18.65	18.39	18.19	18.06	20.65	20.57	20.53	18.15	18.14
0.719	0.792	0.818	0.866	0.909	0.943	0.947	0.968	0.981	0.989	0.994
4.116	4.288	4.358	4.513	4.703	4.920	4.955	5.180	5.419	5.656	5.894

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.460	2.454	2.443	2.441	2.439	2.436	2.454	2.453	2.452	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13
0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.140	6.388	6.692	6.941	7.190	7.440	7.637	7.887	8.137	8.387	8.639

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.451	2.449	2.446	2.439	2.436	2.432	
18.16	18.22	18.33	23.25	23.72	24.62	
1.000	1.000	1.000	1.000	1.000	1.000	
8.889	9.140	9.391	9.691	9.945	10.204	

259 o-SULFANILIC ACID C6H7NO3S

	-1	33.4	7.488		173.19		pHL	3.00	3.25	3.50
							RE	□□□□□□	□□□□□□	□□□□□□
							t	23.80	22.79	22.08
							Z	0.011	0.013	0.016
							pHS	5.518	5.605	5.684

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
□□□□□□	96,602	67,988	59,744	50,784	41,726	34,677	29,299	23,954	12,186	11,128
21,52	21,08	18,34	18,25	18,17	18,09	20,52	20,49	20,47	18,18	18,18
0.019	0.023	0.033	0.038	0.045	0.055	0.066	0.078	0.096	0.191	0.210
5.767	5.861	6.019	6.077	6.151	6.240	6.326	6.405	6.501	6.844	6.893

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8 00	8.25	8.50
9,820	8,393	4,981	4,626	4,196	3,748	3,156	2,989	2,822	2,685	2,586
18,17	18,17	24,93	24,94	24,95	24,97	18,11	18,11	18,11	18,12	18,14
0.238	0.280	0.477	0.515	0.569	0.639	0.769	0.814	0.863	0.909	0.946
6.963	7.055	7.422	7.487	7.580	7.706	7.976	8.092	8.252	8.448	8.696

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2,531	2,495	2,473	2,453	2,443	2,436	
18,17	18,23	18,34	23,26	23,72	24,63	
0.967	0.981	0.989	0.994	0.997	0.998	
8.915	9.152	9.397	9.695	9.947	10.205	

260 SULFURIC ACID H2SO4

	-1	52.0	-3.000		98.07		pHL	3.00	3.25	3.50
	-2	82.9	1.921				RE	1.052	1.044	1.039
							t	35.73	32.38	30.47
							Z	1.948	1.970	1.983
							pHS	3.020	3.266	3.513

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1,036	1,034	1,038	1,037	1,036	1,036	1,034	1,033	1,032	1,036	1,036
29,39	28,78	26,74	26,39	26,20	26,09	28,25	28,20	28,16	26,17	26,16
1,990	1,994	1,994	1,997	1,998	1,999	1,999	1,999	2,000	2,000	2,000
3.761	4.011	4.011	4.260	4.510	4.760	4.760	5.010	5.260	5.510	5.760

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8,00	8.25	8.50
1,036	1,035	1,031	1,031	1,030	1,029	1,036	1,036	1,036	1,036	1,036
26,16	26,16	31,95	31,94	31,94	31,93	26,11	26,12	26,13	26,13	26,14
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
6,010	6,260	6,511	6,761	7,011	7,261	7,510	7,760	8,010	8,260	8,510

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 1 , 4
1,036	1,035	1,035	1,031	1,030	1,030	
26,15	26,19	26,24	30,16	30,31	30,59	
2,000	2,000	2,000	2,000	2,000	1,999	
8,760	9,010	9,260	9,511	9,761	10,011	

261 SULFUROUS ACID H2SO3

	-1	51.8	1.780		82.07		pHL	3.00	3.25	3.50
	-2	74.6	6.991				RE	1.603	1.580	1.566
							t	21.82	19.62	18.29
							Z	0.964	0.978	0.987
							pHS	3.165	3.382	3.603

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1,557	1,551	1,555	1,551	1,548	1,544	1,544	1,539	1,531	1,523	1,505
17,49	17,01	15,45	15,20	15,08	15,05	16,71	16,78	16,96	15,77	16,32
0,993	0,997	0,997	1,000	1,003	1,008	1,008	1,015	1,028	1,050	1,086
3.834	4.075	4.080	4.316	4.561	4.808	4.821	5.070	5.319	5.583	5.831

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1,476	1,435	1,360	1,313	1,267	1,227	1,206	1,188	1,176	1,168	1,165
17,18	18,41	25,97	27,63	29,24	30,63	25,49	26,05	26,42	26,65	26,79
1,143	1,228	1,394	1,511	1,634	1,747	1,843	1,901	1,940	1,965	1,980
6.078	6.324	6.664	6.866	7.082	7.309	7.566	7.791	8 031	8.276	8.526

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2 , 7
1,162	1,160	1,159	1,153	1,152	1,151	
26,89	26,97	27,05	31,46	31,66	32,01	
1,989	1,994	1,996	1,998	1,999	1,999	
8.774	9.023	9.273	9.529	9.779	10.030	

262 TAPS C7H17NO6S 243.27

-1	25.0	8.300	

pHL	3.00	3.25	3.50
RE	□□□□□□	□□□□□□	□□□□□□
t	29.08	27.52	26.46
Z	0.004	0.005	0.007
pHS	5.946	6.034	6.115

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
□□□□□□	□□□□□□	□□□□□□	□□□□□□	□□□□□□	□□□□□□	□□□□□□	91,527	73,907	36,649	33,079
25,63	25,01	21,36	21,23	21,11	21,01	24,24	24,21	24,18	21,16	21,16
0.008	0.010	0.014	0.016	0.019	0.023	0.028	0.033	0.041	0.084	0.093
6.200	6.296	6.438	6.499	6.575	6.666	6.748	6.829	6.925	7.252	7.301

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
28,756	24,110	12,350	11,273	9,964	8,562	6,149	5,678	5,143	4,622	4,077
21,16	21,17	30,19	30,21	30,24	30,29	21,21	21,22	21,24	21,27	21,34
0.108	0.129	0.255	0.280	0.317	0.371	0.527	0.572	0.634	0.708	0.809
7.369	7.455	7.816	7.870	7.947	8.049	8.320	8.398	8.509	8.654	8.894

8.75	9.00	9.25	9.50	9.75	10.00
3,833	3,640	3,507	3,394	3,348	3,314
21,40	21,51	21,72	28,69	29,72	31,90
0.862	0.909	0.944	0.972	0.984	0.991
9.063	9.266	9.493	9.806	10.056	10.321

(Ref.) · 11 , 9

N-Tris(hydroxymethyl)methyl-3-aminopropanesulfonic acid

263 TARTARIC ACID (S) C4H6O6 150.09

-1	32.6	3.036	
-2	60.7	4.366	

pHL	3.00	3.25	3.50
RE	2.907	2.590	2.336
t	29.86	28.25	27.62
Z	0.878	0.997	1.120
pHS	3.464	3.622	3.784

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2,114	1,921	1,883	1,758	1,653	1,575	1,565	1,515	1,482	1,474	1,462
27,67	28,23	25,73	26,37	27,03	27,59	30,62	31,01	31,28	28,72	28,81
1.257	1.407	1.452	1.577	1.698	1.800	1.808	1.878	1.927	1.958	1.975
3.964	4.163	4.223	4.404	4.610	4.833	4.855	5.083	5.321	5.571	5.809

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1,455	1,450	1,439	1,437	1,434	1,432	1,449	1,448	1,447	1,445	1,447
28,87	28,90	37,01	37,01	37,01	36,99	28,90	28,90	28,91	28,92	28,93
1,986	1,992	1,996	1,998	1,999	1,999	2,000	2,000	2,000	2,000	2,000
6.055	6.303	6.575	6.823	7.072	7.322	7.552	7.802	8.051	8.301	8.552

8.75	9.00	9.25	9.50	9.75	10.00
1,446	1,445	1,444	1,436	1,434	1,431
28,96	29,01	29,09	34,62	34,90	35,42
2,000	2,000	2,000	2,000	2,000	2,000
8.802	9.052	9.302	9.570	9.820	10.072

(Ref.) : 10 , 1

264 TARTRONIC ACID C3H4O5 120.06

-1	36.0	2.366	
-2	68.3	4.735	

pHL	3.00	3.25	3.50
RE	2.374	2.253	2.141
t	27.42	25.20	24.17
Z	0.957	1.013	1.073
pHS	3.327	3.520	3.718

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2,021	1,886	1,858	1,733	1,611	1,505	1,491	1,414	1,358	1,326	1,306
24,01	24,55	22,42	23,31	24,32	25,27	27,97	28,71	29,25	27,25	27,45
1.148	1.246	1.277	1.386	1.511	1.638	1.653	1.758	1.843	1.908	1.943
3.929	4.152	4.212	4.411	4.621	4.840	4.868	5.085	5.315	5.576	5.802

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1,292	1,283	1,272	1,268	1,266	1,264	1,276	1,275	1,274	1,273	1,274
27,58	27,66	34,83	34,85	34,86	34,86	27,72	27,73	27,73	27,74	27,75
1,967	1,981	1,989	1,994	1,997	1,998	1,999	1,999	2,000	2,000	2,000
6.042	6.288	6.554	6.800	7.048	7.298	7.535	7.785	8.034	8.284	8.535

8.75	9.00	9.25	9.50	9.75	10.00
1,274	1,273	1,272	1,266	1,264	1,263
27,77	27,81	27,88	32,73	32,96	33,37
2,000	2,000	2,000	2,000	2,000	2,000
8,785	9,035	9,285	9,546	9,796	10,047

(Ref.) : 10 , 1

265 TEREPHTHALIC ACID C8H6O4

-1	28.0	3.540	166.13				pHL	3.00	3.25	3.50
-2	53.0	4.460					RE	4.141	3.556	3.106
							t	32.28	30.69	29.94
							Z	0.716	0.843	0.976
							pHS	3.642	3.772	3.904

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.722	2.399	2.314	2.130	1.975	1.860	1.844	1.773	1.726	1.715	1.698
29.78	30.14	27.23	27.77	28.40	28.98	32.49	32.92	33.21	30.27	30.37
1.129	1.302	1.369	1.505	1.643	1.762	1.774	1.856	1.913	1.950	1.971
4.054	4.229	4.299	4.458	4.649	4.864	4.892	5.113	5.349	5.596	5.833

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.688	1.681	1.665	1.662	1.659	1.656	1.680	1.678	1.677	1.675	1.678
30.43	30.46	39.86	39.86	39.85	39.83	30.48	30.48	30.48	30.49	30.51
1.983	1.990	1.995	1.997	1.998	1.999	1.999	2.000	2.000	2.000	2.000
6.077	6.325	6.605	6.854	7.103	7.352	7.574	7.823	8.073	8.323	8.574

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 7
1.676	1.674	1.672	1.661	1.658	1.654	
30.54	30.60	30.70	37.15	37.52	38.23	
2.000	2.000	2.000	2.000	2.000	2.000	
8.824	9.074	9.325	9.600	9.851	10.104	

266 THIOACETIC ACID C2H4OS

-1	43.7	3.337	76.11				pHL	3.00	3.25	3.50
							RE	2.925	2.617	2.393
							t	22.16	20.66	19.65
							Z	0.623	0.697	0.764
							pHS	3.521	3.665	3.812

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.216	2.080	2.059	1.987	1.933	1.897	1.893	1.873	1.860	1.859	1.855
18.91	18.41	16.46	16.22	16.06	15.95	17.91	17.86	17.82	16.02	16.01
0.827	0.882	0.895	0.928	0.955	0.973	0.974	0.985	0.991	0.995	0.997
3.979	4.174	4.227	4.408	4.620	4.851	4.874	5.110	5.354	5.595	5.838

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.852	1.849	1.845	1.844	1.843	1.842	1.850	1.850	1.849	1.848	1.850
16.00	16.00	21.24	21.24	21.24	21.24	15.97	15.97	15.98	15.99	15.99
0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.086	6.335	6.622	6.871	7.121	7.371	7.585	7.835	8.085	8.335	8.586

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
1.849	1.848	1.846	1.844	1.842	1.840	
16.02	16.05	16.12	19.75	20.00	20.46	
1.000	1.000	1.000	1.000	1.000	1.000	
8.836	9.086	9.337	9.619	9.871	10.125	

267 THIOCYANIC ACID HSCN

-1	68.5	0.848	59.09				pHL	3.00	3.25	3.50
							RE	1.166	1.163	1.161
							t	19.19	17.25	16.13
							Z	0.994	0.997	0.998
							pHS	3.050	3.290	3.531

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.160	1.159	1.160	1.160	1.160	1.159	1.159	1.159	1.159	1.160	1.160
15.49	15.12	13.96	13.75	13.63	13.57	14.79	14.76	14.74	13.61	13.60
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.775	4.023	4.024	4.270	4.518	4.767	4.771	5.021	5.271	5.518	5.767

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.159	1.159	1.159	1.159	1.159	1.159	1.160	1.160	1.160	1.159	1.160
13.60	13.60	16.88	16.88	16.88	16.88	13.58	13.58	13.58	13.59	13.59
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.017	6.267	6.525	6.775	7.025	7.275	7.517	7.767	8.017	8.267	8.517

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 2
1.159	1.159	1.159	1.159	1.159	1.158	
13.60	13.62	13.65	15.88	15.98	16.16	
1.000	1.000	1.000	1.000	1.000	1.000	
8.767	9.017	9.268	9.524	9.775	10.025	

268 THIOCYANOACETIC ACID C3H3NOS

-1	40.6	2.585	101.10

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	2.311	2.200	2.126	2.074	2.039	2.045	2.025	2.013	2.004	2.003
t	24.38	22.14	20.70	19.74	19.14	17.09	16.78	16.58	16.47	18.59
Z	0.858	0.902	0.934	0.958	0.975	0.976	0.985	0.991	0.995	0.995
pHS	3.328	3.511	3.701	3.910	4.137	4.153	4.372	4.607	4.851	4.872

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
1.997	1.994	2.000	1.999	1.997	1.996	1.991	1.990	1.989	1.988	1.999
18.52	18.49	16.54	16.53	16.52	16.52	22.18	22.18	22.17	22.17	16.49
0.997	0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5.117	5.366	5.601	5.849	6.098	6.348	6.639	6.889	7.139	7.389	7.598

7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50
1.998	1.997	1.996	1.998	1.997	1.995	1.994	1.990
16.49	16.50	16.51	16.52	16.54	16.58	16.66	20.60
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.848	8.098	8.348	8.599	8.850	9.100	9.351	9.637

9.75	10.00	(Ref.)	: 3
1.988	1.986		
20.89	21.44		
1.000	1.000		
9.890	10.145		

269 THIOGLYCOLIC ACID C2H4O2S

-1	38.6	3.545	92.11

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4 50	4.75	4 75
RE	3.687	3.260	2.945	2.687	2.483	2.441	2.332	2.247	2.188	2.181
t	23.62	22.04	20.97	20.18	19.63	17.39	17.14	16.96	16.85	19.07
Z	0.560	0.635	0.704	0.773	0.839	0.858	0.899	0.934	0.960	0.962
pHS	3.619	3.753	3.888	4.044	4.226	4.289	4.456	4.657	4.881	4.910

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
2.147	2.125	2.123	2.115	2.110	2.107	2.100	2.099	2.097	2.095	2.108
19.01	18.97	16.92	16.91	16.91	16.90	22.87	22.86	22.86	22.86	16.87
0.977	0.987	0.992	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000
5.141	5.383	5.622	5.863	6.110	6.358	6.653	6.902	7.152	7.402	7.608

7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50
2.107	2.106	2.104	2.106	2.105	2.104	2.102	2.098
16.87	16.88	16.89	16.90	16.93	16.97	17.06	21.22
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
7.858	8.108	8.358	8.609	8.859	9.110	9.361	9.650

9.75	10.00	(Ref.)	3
2.095	2.093		
21.56	22.18		
1 000	1.000		
9.903	10.159		

270 THIOSULFURIC ACID H2S2O3

-1	44.0	0.600	114.13
-2	88.1	1.720	

pHL	3.00	3.25	3.50	3.75	4.00	4.00	4.25	4.50	4.75	4.75
RE	0.986	0.979	0.974	0.972	0.970	0.973	0.972	0.972	0.971	0.969
t	35.11	31.74	29.85	28.79	28.20	26.29	25.95	25.77	25.66	27.69
Z	1.965	1.980	1.989	1.994	1.996	1.996	1.998	1.999	1.999	1.999
pHS	3.001	3.250	3.501	3.751	4.002	4.002	4.252	4.503	4.753	4.752

5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50
0,969	0,968	0,971	0,971	0,971	0,971	0,967	0,967	0,966	0,965	0,971
27,63	27,60	25,73	25,72	25,72	25,75	31,15	31,14	31 14	31,14	25,68
2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
5.002	5.252	5.503	5.753	6.003	6.253	6.501	6.751	7.001	7.251	7.503

7.75	8.00	8.25	8.50	8.75	9.00	9.25	9.50
0,971	0,971	0,971	0,971	0,971	0,971	0,971	0,967
25,68	25,69	25,70	25,70	25,72	25,75	25,79	29,46
2.000	2.000	2.000	2 000	2.000	2.000	2.000	2.000
7,753	8.003	8.253	8.503	8,753	9,003	9,253	9,501

9.75	10.00	(Ref.)	2 , 4
0,967	0,966		
29 60	29,86		
2.000	2.000		
9,751	10.001		

271 p-TOLUENESULFONIC ACID C7H8O3S

	-1	31.1	-2.000

172.20

pHL	3.00	3.25	3.50
RE	2.630	2.630	2.630
t	29.77	26.46	24.40
Z	1.000	1.000	1.000
pHS	3.320	3.525	3.732

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.630	2.628	2.643	2.643	2.641	2.639	2.636	2.633	2.631	2.646	2.645
23.08	22.26	19.58	19.15	18.88	18.73	21.53	21.45	21.40	18.83	18.82
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.953	4.188	4.192	4.418	4.657	4.902	4.930	5.177	5.426	5.654	5.903

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.643	2.640	2.630	2.629	2.627	2.624	2.646	2.645	2.643	2.641	2.645
18.81	18.80	26.28	26.28	26.27	26.26	18.77	18.77	18.78	18.79	18.81
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.152	6.402	6.710	6.960	7.210	7.459	7.652	7.902	8.152	8.402	8.654

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 12
2.643	2.640	2.637	2.628	2.624	2.619	
18.85	18.92	19.05	24.39	24.95	26.05	
1.000	1.000	1.000	1.000	1.000	1.000	
8.905	9.156	9.407	9.712	9.968	10.229	

272 m-TOLUIC ACID C8H8O2

	-1	29.1	4.272

136.15

pHL	3.00	3.25	3.50
RE	8.002	6.822	5.932
t	27.47	25.75	24.58
Z	0.340	0.400	0.462
pHS	3.962	4.072	4.180

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.166	4.499	4.188	3.854	3.545	3.292	3.240	3.085	2.977	2.928	2.891
23.69	23.05	19.96	19.73	19.53	19.40	22.38	22.30	22.26	19.52	19.50
0.532	0.614	0.666	0.725	0.791	0.854	0.867	0.911	0.945	0.968	0.981
4.301	4.445	4.540	4.661	4.816	5.003	5.051	5.250	5.472	5.716	5.938

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.866	2.850	2.828	2.823	2.819	2.815	2.840	2.839	2.836	2.833	2.838
19.49	19.48	27.51	27.50	27.49	27.48	19.45	19.45	19.46	19.47	19.50
0.989	0.994	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.176	6.421	6.734	6.981	7.229	7.479	7.668	7.917	8.167	8.417	8.670

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
2.835	2.832	2.828	2.817	2.813	2.806	
19.54	19.63	19.77	25.54	26.21	27.55	
1.000	1.000	1.000	1.000	1.000	1.000	
8.920	9.171	9.423	9.733	9.990	10.253	

273 o-TOLUIC ACID C8H8O2

	-1	29.1	3.908

136.15

pHL	3.00	3.25	3.50
RE	6.018	5.231	4.638
t	28.03	26.09	24.78
Z	0.456	0.527	0.596
pHS	3.806	3.927	4.048

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.138	3.719	3.598	3.378	3.190	3.051	3.027	2.945	2.891	2.880	2.861
23.80	23.10	20.06	19.77	19.55	19.40	22.39	22.31	22.26	19.52	19.50
0.670	0.748	0.780	0.832	0.883	0.925	0.931	0.957	0.975	0.985	0.991
4.186	4.350	4.423	4.569	4.750	4.960	5.000	5.221	5.456	5.691	5.927

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.849	2.840	2.823	2.820	2.817	2.814	2.840	2.838	2.836	2.833	2.837
19.49	19.48	27.51	27.50	27.49	27.48	19.45	19.45	19.46	19.47	19.50
0.995	0.997	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.171	6.419	6.732	6.980	7.229	7.479	7.667	7.917	8.167	8.417	8.670

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 1
2.835	2.832	2.828	2.817	2.813	2.806	
19.54	19.63	19.77	25.54	26.21	27.55	
1.000	1.000	1.000	1.000	1.000	1.000	
8.920	9.171	9.423	9.733	9.990	10.253	

274 p-TOLUIC ACID C8H8O2

	-1	29.1	4.373		136.15		pHL	3.00	3.25	3.50
							RE	8.717	7.400	6.406
							t	27.34	25.67	24.53
							Z	0.312	0.368	0.427
							pHS	4.007	4.115	4.220

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.547	4.794	4.406	4.035	3.685	3.392	3.327	3.145	3.015	2.949	2.904
23.67	23.03	19.93	19.71	19.53	19.40	22.37	22.30	22.26	19.52	19.50
0.495	0.575	0.631	0.691	0.759	0.827	0.843	0.893	0.933	0.961	0.976
4.337	4.476	4.576	4.692	4.839	5.019	5.070	5.262	5.479	5.727	5.943

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.874	2.855	2.830	2.824	2.819	2.815	2.841	2.839	2.836	2.833	2.838
19.49	19.48	27.50	27.50	27.49	27.48	19.45	19.45	19.46	19.47	19.50
0.986	0.992	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.178	6.422	6.736	6.981	7.230	7.479	7.668	7.917	8.167	8.417	8.670

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 11 , 1
2.835	2.832	2.828	2.817	2.813	2.806	
19.54	19.63	19.77	25.54	26.21	27.55	
1.000	1.000	1.000	1.000	1.000	1.000	
8.920	9.171	9.423	9.733	9.990	10.253	

275 TRIBROMOACETIC ACID C2HBr3O2

	-1	36.5	1.000		296.74		pHL	3.00	3.25	3.50
							RE	2.235	2.231	2.228
							t	26.84	23.91	22.11
							Z	0.995	0.997	0.998
							pHS	3.264	3.474	3.686

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.226	2.225	2.234	2.233	2.232	2.230	2.228	2.227	2.225	2.235	2.234
20.97	20.28	18.02	17.64	17.42	17.29	19.66	19.59	19.55	17.37	17.36
0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.911	4.148	4.152	4.382	4.623	4.869	4.892	5.139	5.388	5.620	5.869

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.233	2.231	2.224	2.224	2.222	2.221	2.235	2.234	2.233	2.231	2.234
17.35	17.35	23.68	23.67	23.67	23.66	17.32	17.32	17.33	17.34	17.35
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.119	6.368	6.666	6.916	7.166	7.416	7.619	7.869	8.119	8.369	8.620

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 3 , 12
2.233	2.231	2.229	2.223	2.221	2.218	
17.38	17.43	17.52	21.96	22.34	23.06	
1.000	1.000	1.000	1.000	1.000	1.000	
8.870	9.121	9.372	9.665	9.919	10.176	

276 TRICHLOROACETIC ACID C2HCl3O2

	-1	37.9	0.635		163.39		pHL	3.00	3.25	3.50
							RE	2.144	2.142	2.141
							t	26.25	23.39	21.63
							Z	0.998	0.999	0.999
							pHS	3.249	3.461	3.675

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.139	2.138	2.147	2.146	2.145	2.144	2.142	2.141	2.139	2.148	2.147
20.53	19.86	17.69	17.33	17.11	16.99	19.27	19.20	19.16	17.07	17.06
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.901	4.139	4.143	4.373	4.615	4.862	4.883	5.131	5.380	5.613	5.862

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.146	2.145	2.139	2.138	2.137	2.135	2.148	2.148	2.146	2.145	2.147
17.05	17.05	23.13	23.12	23.12	23.12	17.01	17.02	17.02	17.03	17.04
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.111	6.361	6.657	6.906	7.156	7.406	7.611	7.861	8.111	8.361	8.613

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) , 2 , 7
2.146	2.144	2.143	2.138	2.136	2.133	
17.07	17.12	17.21	21.46	21.81	22.46	
1.000	1.000	1.000	1.000	1.000	1.000	
8.863	9.113	9.364	9.655	9.909	10.165	

277 TRICHLOROACRYLIC ACID C3HCl3O2

	-1	33.4	0.000

175.40

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	2.442	2.441	2.441
t	28.41	25.28	23.33
Z	1.000	1.000	1.000
pHS	3.294	3.501	3.711

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.440	2.439	2.452	2.451	2.450	2.448	2.445	2.443	2.441	2.454	2.453
22.09	21.34	18.85	18.44	18.20	18.06	20.66	20.58	20.53	18.15	18.14
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
3.934	4.169	4.173	4.401	4.641	4.887	4.913	5.160	5.409	5.639	5.887

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.451	2.449	2.441	2.439	2.438	2.436	2.454	2.453	2.451	2.450	2.453
18.13	18.12	25.06	25.06	25.05	25.05	18.09	18.09	18.10	18.11	18.13
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.137	6.387	6.690	6.940	7.190	7.440	7.637	7.887	8.137	8.387	8.639

8.75	9.00	9.25	9.50	9.75	10.00
2.451	2.449	2.446	2.439	2.436	2.432
18.16	18.22	18.33	23.25	23.72	24.62
1.000	1.000	1.000	1.000	1.000	1.000
8.889	9.140	9.391	9.691	9.945	10.204

(Ref.) : 3 , 12

278 TRICHLOROLACTIC ACID C3H3Cl3O3

	-1	34.2	2.347

193.41

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	2.595	2.519	2.469
t	27.48	24.70	22.93
Z	0.915	0.943	0.963
pHS	3.343	3.533	3.728

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.434	2.411	2.422	2.409	2.400	2.394	2.391	2.387	2.383	2.395	2.393
21.77	21.04	18.60	18.22	17.98	17.84	20.38	20.30	20.26	17.94	17.92
0.977	0.986	0.987	0.992	0.995	0.997	0.997	0.999	0.999	1.000	1.000
3.941	4.171	4.181	4.402	4.639	4.884	4.909	5.155	5.403	5.634	5.883

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.391	2.389	2.381	2.380	2.378	2.376	2.394	2.393	2.391	2.389	2.392
17.91	17.91	24.68	24.68	24.67	24.67	17.87	17.88	17.88	17.90	17.91
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.132	6.382	6.684	6.934	7.183	7.433	7.632	7.882	8.132	8.382	8.634

8.75	9.00	9.25	9.50	9.75	10.00
2.391	2.389	2.386	2.380	2.377	2.372
17.95	18.00	18.11	22.89	23.33	24.18
1.000	1.000	1.000	1.000	1.000	1.000
8.884	9.135	9.386	9.684	9.938	10.197

(Ref.) : 3

279 TRIMETAPHOSPHORIC ACID H3P3O9

	-1	28.9	-2.000
	-2	57.8	-1.000
	-3	87.6	2.050

239.94

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	1.088	1.081	1.075
t	54.45	49.14	46.13
Z	2.946	2.969	2.982
pHS	3.029	3.275	3.522

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
1.072	1.069	1.080	1.078	1.077	1.076	1.070	1.068	1.067	1.078	1.077
44.42	43.45	40.37	39.82	39.50	39.33	42.66	42.56	42.49	39.47	39.45
2.990	2.994	2.994	2.997	2.998	2.999	2.999	2.999	3.000	3.000	3.000
3.771	4.020	4.021	4.269	4.519	4.769	4.770	5.020	5.270	5.519	5.769

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1.076	1.075	1.064	1.063	1.061	1.059	1.078	1.078	1.077	1.076	1.077
39.44	39.43	48.34	48.32	48.29	48.26	39.39	39.39	39.39	39.40	39.41
3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
6.019	6.269	6.522	6.772	7.021	7.271	7.519	7.769	8.019	8.269	8.519

8.75	9.00	9.25	9.50	9.75	10.00
1.077	1.075	1.074	1.064	1.062	1.061
39.44	39.48	39.55	45.57	45.80	46.24
3.000	3.000	3.000	3.000	3.000	3.000
8.769	9.019	9.269	9.521	9.771	10.021

(Ref.) : 11 , 4

280 TRIMETHYLACETIC ACID (S) C5H10O2

-1	31.8	5.037	102.13				pHL	3.00	3.25	3.50
							RE	15.015	12.497	10.607
							t	25.11	23.83	22.96
							Z	0.163	0.196	0.231
							pHS	4.309	4.406	4.497
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
8.954	7.461	6.196	5.549	4.883	4.256	4.014	3.610	3.265	2.947	2.833
22.28	21.76	18.88	18.74	18.61	18.51	21.18	21.13	21.10	18.61	18.60
0.275	0.331	0.403	0.451	0.515	0.593	0.630	0.702	0.779	0.872	0.908
4.596	4.710	4.841	4.926	5.034	5.170	5.237	5.378	5.550	5.834	5.995
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.738	2.672	2.615	2.595	2.581	2.573	2.590	2.587	2.584	2.581	2.584
18.59	18.59	25.89	25.88	25.88	25.87	18.55	18.55	18.56	18.57	18.59
0.940	0.963	0.982	0.989	0.994	0.997	0.998	0.999	0.999	1.000	1.000
6.195	6.420	6.735	6.966	7.209	7.456	7.651	7.899	8.148	8.398	8.650
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3 , 7				
2.582	2.579	2.576	2.568	2.564	2.559					
18.63	18.70	18.82	24.02	24.55	25.59					
1.000	1.000	1.000	1.000	1.000	1.000					
8.900	9.151	9.402	9.705	9.961	10.221					

281 TRIMETHYLACRYLIC ACID C6H10O2

-1	30.3	4.420	114.14				pHL	3.00	3.25	3.50
							RE	8.773	7.431	6.419
							t	26.51	24.94	23.88
							Z	0 297	0.351	0.408
							pHS	4.023	4.131	4.234
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
5.543	4.772	4.344	3.971	3.614	3.310	3.240	3.051	2.914	2.838	2.791
23.06	22.47	19.48	19.28	19.11	18.98	21.83	21.76	21.72	19.09	19.08
0.474	0.553	0.613	0.673	0.742	0.812	0.829	0.882	0.925	0.956	0.973
4.349	4.484	4.590	4.701	4.845	5.020	5.072	5.259	5.473	5.725	5.937
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.759	2.738	2.714	2.708	2.703	2.699	2.722	2.720	2.718	2.715	2.719
19.07	19.06	26.75	26.74	26.74	26.73	19.03	19.03	19.04	19.05	19.07
0.984	0.991	0.995	0.997	0.999	0.999	0.999	1.000	1.000	1.000	1.000
6.170	6.413	6.725	6.970	7.218	7.467	7.659	7.908	8.158	8.408	8.660
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3				
2.717	2.714	2.710	2.701	2.696	2.691					
19.12	19.19	19.32	24.83	25.43	26.62					
1.000	1.000	1.000	1.000	1.000	1.000					
8.911	9.162	9.413	9.720	9.976	10.238					

282 2,4,6-TRIMETHYLBENZOIC ACID C10H12O2

-1	24.7	3.437	164.20				pHL	3.00	3.25	3.50
							RE	5.123	4.630	4.265
							t	32.68	29.90	28.02
							Z	0.643	0.713	0.777
							pHS	3.664	3.804	3.948
3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
3.971	3.746	3.739	3.613	3.518	3.455	3.440	3.403	3.380	3.395	3.386
26.67	25.75	22.23	21.80	21.50	21.31	24.88	24.77	24.70	21.45	21.43
0.837	0.889	0.898	0.930	0.956	0.974	0.976	0.986	0.992	0.995	0.997
4.115	4.309	4.348	4.529	4.740	4.971	5.009	5.246	5.490	5.716	5.960
6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.380	3.374	3.351	3.349	3.345	3.342	3.381	3.379	3.375	3.371	3.378
21.41	21.40	30.93	30.92	30.91	30.90	21.37	21.37	21.38	21.40	21.44
0.998	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.208	6.457	6.779	7.028	7.278	7.528	7.707	7.957	8.207	8.457	8.710
8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 11 , 7				
3.374	3.370	3.364	3.346	3.339	3.328					
21.50	21.62	21.83	28.87	29.94	32.19					
1.000	1.000	1.000	1.000	1.000	1.000					
8.961	9.212	9.465	9.790	10.050	10.320					

283 TRIMETYLPYRUVIC ACID C6H1003

-1	29.2	1.469	130.14

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	2.842	2.830	2.823
t	30.97	27.56	25.41
Z	0.988	0.992	0.995
pHS	3.351	3.551	3.754

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.817	2.813	2.830	2.828	2.825	2.822	2.817	2.814	2.811	2.829	2.828
24.01	23.15	20.28	19.82	19.54	19.37	22.37	22.27	22.22	19.48	19.46
0.997	0.998	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
3.972	4.205	4.210	4.434	4.672	4.917	4.946	5.193	5.442	5.669	5.917

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.825	2.822	2.809	2.808	2.806	2.803	2.829	2.828	2.826	2.823	2.827
19.45	19.45	27.44	27.43	27.43	27.42	19.41	19.42	19.42	19.44	19.46
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.166	6.416	6.728	6.978	7.228	7.477	7.666	7.916	8.166	8.416	8.669

8.75	9.00	9.25	9.50	9.75	10.00
2.825	2.822	2.818	2.807	2.803	2.796
19.51	19.59	19.73	25.48	26.15	27.47
1.000	1.000	1.000	1.000	1.000	1.000
8.919	9.170	9.422	9.732	9.989	10.252

(Ref.) : 3

284 VALERIC ACID C5H1002

-1	31.6	4.842	102.13

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	12.475	10.427	8.888
t	25.35	24.02	23.10
Z	0.198	0.237	0.279
pHS	4.216	4.316	4.410

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
7.545	6.338	5.413	4.873	4.326	3.823	3.657	3.333	3.070	2.860	2.771
22.39	21.86	18.97	18.82	18.68	18.57	21.27	21.22	21.18	18.67	18.66
0.330	0.395	0.467	0.520	0.588	0.667	0.698	0.768	0.836	0.906	0.936
4.512	4.632	4.757	4.848	4.966	5.112	5.175	5.329	5.516	5.788	5.967

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.703	2.657	2.616	2.602	2.593	2.586	2.606	2.603	2.600	2.598	2.601
18.65	18.65	26.00	25.99	25.99	25.98	18.61	18.61	18.62	18.63	18.65
0.960	0.976	0.988	0.993	0.996	0.998	0.999	0.999	1.000	1.000	1.000
6.180	6.413	6.726	6.963	7.209	7.456	7.651	7.900	8.149	8.399	8.651

8.75	9.00	9.25	9.50	9.75	10.00
2.599	2.596	2.593	2.585	2.581	2.576
18.69	18.76	18.88	24.12	24.66	25.72
1.000	1.000	1.000	1.000	1.000	1.000
8.901	9.152	9.404	9.707	9.963	10.223

(Ref.) : 10 , 1

285 VANILLIC ACID C8H804

-1	27.1	4.523	168.15

	3.00	3.25	3.50
pHL	3.00	3.25	3.50
RE	10.559	8.918	7.677
t	28.62	26.85	25.64
Z	0.276	0.328	0.382
pHS	4.084	4.189	4.291

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
6.601	5.651	5.121	4.658	4.213	3.830	3.734	3.494	3.317	3.218	3.156
24.73	24.06	20.72	20.49	20.31	20.17	23.37	23.30	23.25	20.31	20.29
0.446	0.523	0.583	0.643	0.714	0.788	0.808	0.865	0.913	0.949	0.968
4.404	4.537	4.640	4.749	4.889	5.060	5.114	5.298	5.508	5.758	5.967

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
3.114	3.087	3.054	3.046	3.039	3.034	3.064	3.062	3.059	3.055	3.060
20.28	20.27	28.92	28.91	28.90	28.89	20.24	20.24	20.25	20.27	20.30
0.981	0.989	0.995	0.997	0.998	0.999	0.999	1.000	1.000	1.000	1.000
6.198	6.440	6.759	7.003	7.251	7.500	7.685	7.934	8.184	8.434	8.687

8.75	9.00	9.25	9.50	9.75	10.00
3.057	3.054	3.049	3.036	3.030	3.022
20.35	20.44	20.61	26.90	27.72	29.38
1.000	1.000	1.000	1.000	1.000	1.000
8.937	9.188	9.441	9.757	10.015	10.281

(Ref.) : 11 , 2

286	VINYLACETIC ACID				C4H6O2		pHL	3.00	3.25	3.50
	-1	38.6	4.342		86.09		RE	6.648	5.639	4.882
							t	22.58	21.44	20.66
							Z	0.306	0.361	0.418
							pHS	3.962	4.070	4.173

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
4.227	3.649	3.297	3.026	2.765	2.542	2.494	2.355	2.254	2.193	2.159
20.04	19.58	17.24	17.09	16.95	16.85	19.06	19.01	18.97	16.92	16.91
0.485	0.563	0.629	0.686	0.753	0.821	0.837	0.888	0.928	0.959	0.975
4.287	4.423	4.538	4.648	4.791	4.967	5.016	5.202	5.416	5.675	5.887

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.136	2.121	2.107	2.103	2.099	2.097	2.108	2.107	2.106	2.104	2.107
16.91	16.90	22.87	22.86	22.86	22.86	16.87	16.87	16.88	16.89	16.90
0.985	0.991	0.996	0.998	0.999	0.999	1.000	1.000	1.000	1.000	1.000
6.120	6.363	6.660	6.905	7.153	7.402	7.609	7.858	8.108	8.358	8.609

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) · 3 , 7
2.105	2.104	2.102	2.098	2.095	2.093	
16.93	16.97	17.06	21.22	21.56	22.18	
1.000	1.000	1.000	1.000	1.000	1.000	
8.859	9.110	9.361	9.650	9.903	10.159	

287	VINYLGLYCOLIC ACID				C4H6O3		pHL	3.00	3.25	3.50
	-1	35.4	3.319		102.09		RE	3.499	3.155	2.903
							t	25.41	23.48	22.18
							Z	0.648	0.720	0.784
							pHS	3.552	3.696	3.845

3.75	4.00	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50	5.75
2.704	2.554	2.540	2.458	2.397	2.357	2.352	2.328	2.314	2.318	2.313
21.24	20.61	18.18	17.88	17.68	17.55	19.99	19.92	19.88	17.63	17.62
0.844	0.895	0.904	0.935	0.960	0.976	0.977	0.987	0.992	0.996	0.997
4.016	4.213	4.257	4.442	4.656	4.889	4.917	5.154	5.399	5.634	5.878

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
2.309	2.306	2.298	2.296	2.295	2.293	2.308	2.307	2.306	2.304	2.307
17.61	17.61	24.14	24.14	24.13	24.13	17.57	17.58	17.58	17.59	17.61
0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
6.126	6.375	6.675	6.925	7.174	7.424	7.625	7.875	8.125	8.375	8.626

8.75	9.00	9.25	9.50	9.75	10.00	(Ref.) : 3
2.305	2.304	2.301	2.296	2.293	2.289	
17.64	17.70	17.79	22.39	22.80	23.57	
1.000	1.000	1.000	1.000	1.000	1.000	
8.877	9.127	9.379	9.674	9.928	10.186	

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