A P P E N D I X I

TABLE 1

VALUES OF LOG U_H° IN DIFFERENT DIOXAN-WATER MEDIA[1]

Dioxan % (v/v)	Mole fraction of dioxan n_2	log U_H°	
		25°C	35°C
50	0.174	0.20	0.24
60	0.240	0.40	0.42
70	0.330	0.80	0.83

[1]Agrawal, Y.K., Talanta, 20, 1354 (1973).

TABLE 2

VALUES OF $\triangle^*$ AT 25°C

$$\triangle = \log U_H^\circ + \log \frac{[HA]}{[A^-]} + \log {}^{1}/_{y_\pm}$$

Dioxan, Volume per cent		50	60	70
Dioxan, Mole fraction (n_2)		0.174	0.240	0.330
$[HA]$	$[A^-]$	Values of $\triangle$		
0.009	0.001	1.19	1.43	1.87
0.008	0.002	0.87	1.13	1.61
0.007	0.003	0.67	0.92	1.43
0.006	0.004	0.48	0.75	1.26
0.005	0.005	0.32	0.59	1.11
0.004	0.006	0.15	0.42	0.95
0.003	0.007	-0.03	0.24	0.78
0.002	0.008	-0.26	0.02	0.57
0.001	0.009	-0.60	-0.32	0.23

* Agrawal, Y.K., Russ. Chem. Rev., (Uspekhi Khimii), 48, 1773 (1979).

TABLE 3

VALUES OF $\triangle^*$ AT 35°C

$$\triangle = \log U_H^\circ + \log \frac{[HA]}{[A^-]} + \log {}^1/_{y_\pm}$$

Dioxan, Volume per cent		50	60	70
Dioxan, Mole fraction (n_2)		0.174	0.240	0.330
$[HA]$	$[A^-]$	Values of $\triangle$		
0.009	0.001	1.25	1.47	1.92
0.008	0.002	0.93	1.16	1.65
0.007	0.003	0.71	0.95	1.47
0.006	0.004	0.53	0.77	1.30
0.005	0.005	0.36	0.61	1.15
0.004	0.006	0.20	0.45	0.99
0.003	0.007	0.02	0.27	0.82
0.002	0.008	-0.21	0.05	0.61
0.001	0.009	-0.55	0.29	0.27

* Agrawal, Y.K., Russ. Chem. Rev., (Uspekhi Khimii), 48, 1773 (1979).

TABLE 4

IONIC PRODUCT OF WATER AND DIELECTRIC CONSTANTS OF DIOXAN-WATER MIXTURES (1,2)

Dioxan			pK_w				Dielectric[2] constant	
% (v/v)	% (w/w)	n_2	Harned[1]		Interpolated[2]		D	100/D
			25°	35°	25°	35°		
-	0	0	14.00	13.68	-	-	-	1.28
10	-	0.023	-	-	14.27	13.96	68.5	1.46
-	20	0.048	14.62	14.31	-	-	-	-
20	-	0.050	-	-	14.60	14.28	60.5	1.65
30	-	0.083	-	-	14.99	14.68	51.8	1.93
40	-	0.123	-	-	15.47	15.16	42.5	2.35
-	45	0.147	15.86	15.44	-	-	-	-
45	-	0.147	-	-	15.75	15.43	37.5	2.67
50	-	0.174	-	-	16.08	15.71	33.0	3.03
60	-	0.240	-	-	16.86	16.56	25.7	3.89
-	70	0.323	17.86	17.56	-	-	-	-

(1) Harned, H.S., Owen, B.B., "The Physical Chemistry of Electrolytic Solutions", 3rd ed., Reinhold, New York (1958).

(2) Agrawal, Y.K., Russ. Chem. Rev., 48, 947 (1979).