

SOME USEFUL INFORMATION

Chemistry Data

Effect of temperature variation on electrochemical data

(a) pH of standard buffers used in pH meter calibration

pH 4 buffer						
°C	0	10	20	25	30	40
pH	4.00	4.00	4.00	4.01	4.02	4.04

pH 9 buffer						
°C	0	10	20	25	30	40
pH	9.49	9.35	9.24	9.19	9.14	9.07

(b) Electrode potential of calomel reference electrodes

°C	18	20	25	30	35	40
E^{\ominus} (0.1M KCl)	0.336	0.335	0.335	0.335	0.334	0.333
E^{\ominus} (1M KCl)	0.280	0.280	0.278	0.277	0.277	0.277
E^{\ominus} (sat KCl)	0.249	0.248	0.244	0.240	0.236	0.232

(c) Vapour pressure of water

°C	kN m ⁻²
10	1.23
11	1.31
12	1.40
13	1.50
14	1.60
15	1.70
16	1.82
17	1.94
18	2.06
19	2.19
20	2.34
22	2.64
24	2.98
25	3.17
30	4.24
35	5.62
40	7.38
45	9.58
50	12.35
55	15.74
60	19.62
70	31.16
80	47.35
90	70.10
100	101.32