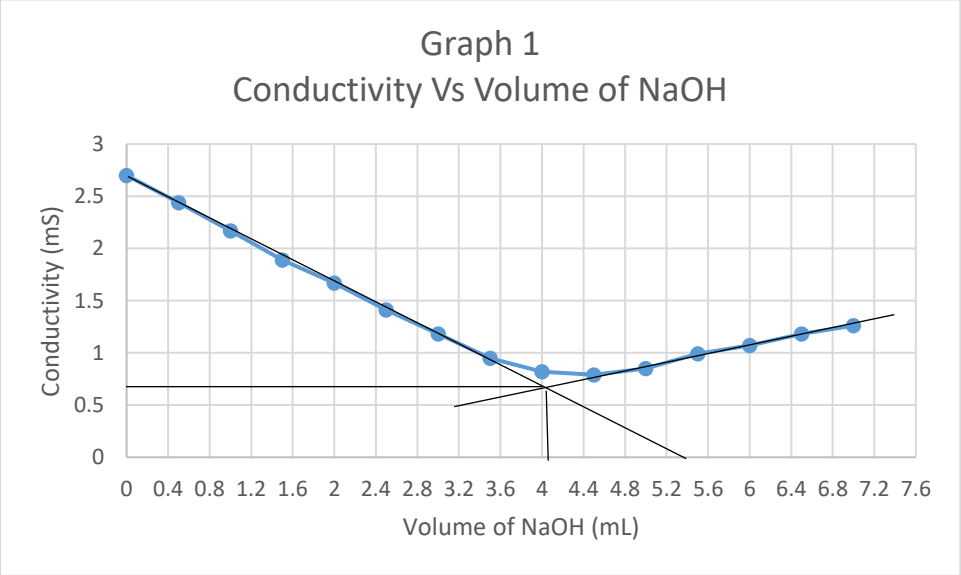
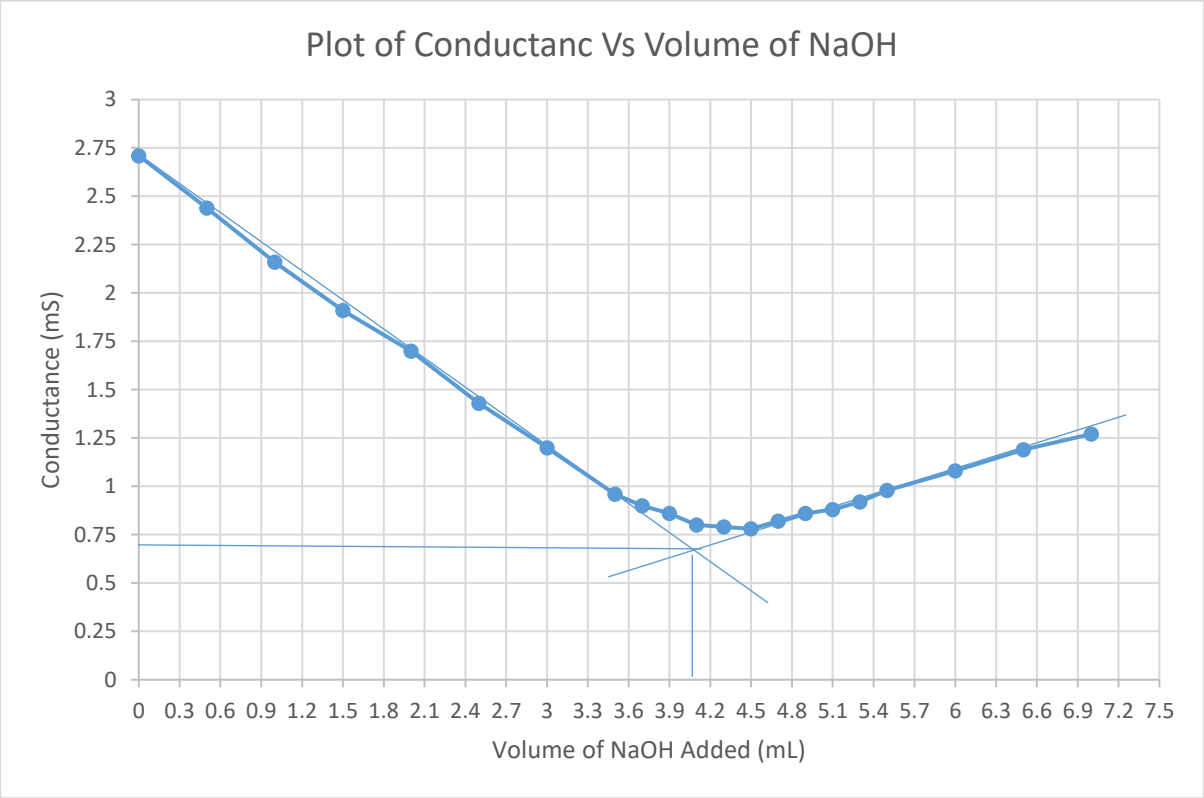
Observation

Titration No	Table I		Table II	
	Volume of NaOH added (in mL)	Conductivity Observation I	Volume of NaOH added (in mL)	Conductivity Observation II
1	0	2.7	0	2.71
2	0.5	2.44	0.5	2.44
3	1	2.17	1	2.16
4	1.5	1.89	1.5	1.91
5	2	1.67	2	1.7
6	2.5	1.41	2.5	1.49
7	3	1.18	3	1.2
8	3.5	0.95	3.5	0.96
9	4	0.82	3.7	0.9
10	4.5	0.79	3.9	0.86
11	5	0.85	4.1	0.8
12	5.5	0.99	4.3	0.79
13	6	1.07	4.5	0.78
14	6.5	1.18	4.7	0.82
15	7	1.26	4.9	0.86
16			5.1	0.88
17			5.3	0.92
18			5.5	0.98
19			6	1.08
20			6.5	1.19
21			7	1.27

Graph 1



Graph 2



Calculation:

Volume of HCl taken = 25 mL

Volume of NaOH added to reach the neutralisation point = 4.1 mL

Concentration of NaOH = 0.05 N

Now, V1S1 = V2S2

Therefore, Concentration of HCl, S1 = V2S2/V1

= 4.1 X 0.05/25

= 0.0082 N

Result:

1. Volume of NaOH added to reach the neutralisation point = 4.1 mL
2. Concentration of HCl is 0.0082N