Data to the titrations in lab 8

strong->weak

HCl --> NH3	
ml HCl	***pH***
0	10.5
1	10.3
2	10.18
3	10.09
4	9.97
5	9.87
6	9.77
7	9.7
8	9.62
9	9.55
10	9.48
11	9.41
12	9.33
13	9.22
14	9.16
15	9.09
16	9
17	8.9
18	8.75
19	8.6
20	8.45
21	8.1
22	7.6
23	3.4
24	2.6
25	2.44
26	2.33
27	2.22

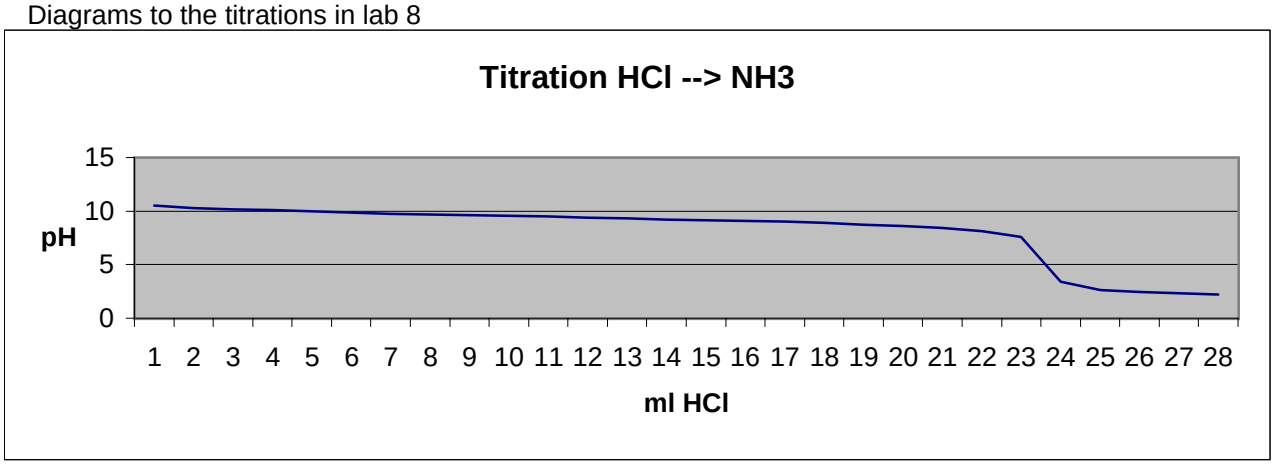
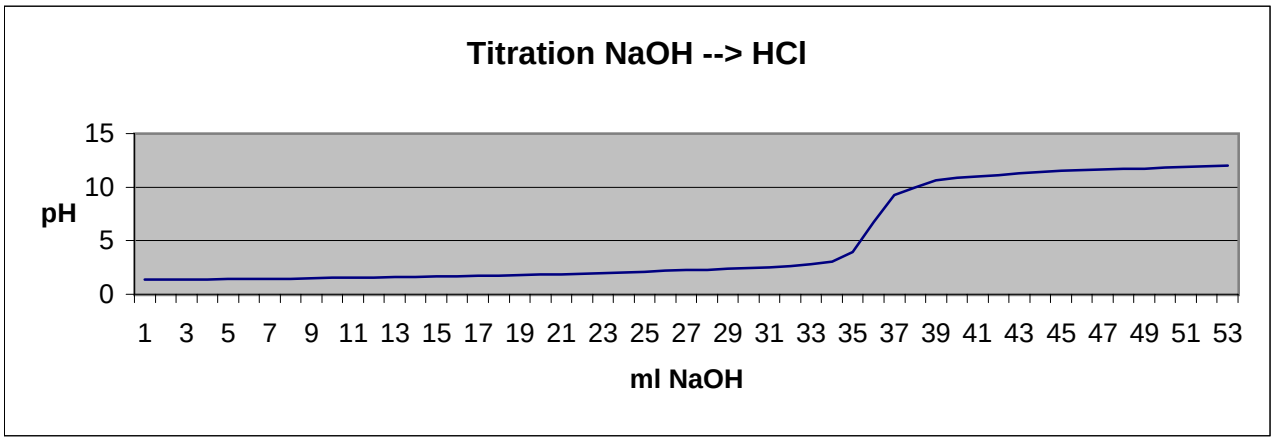
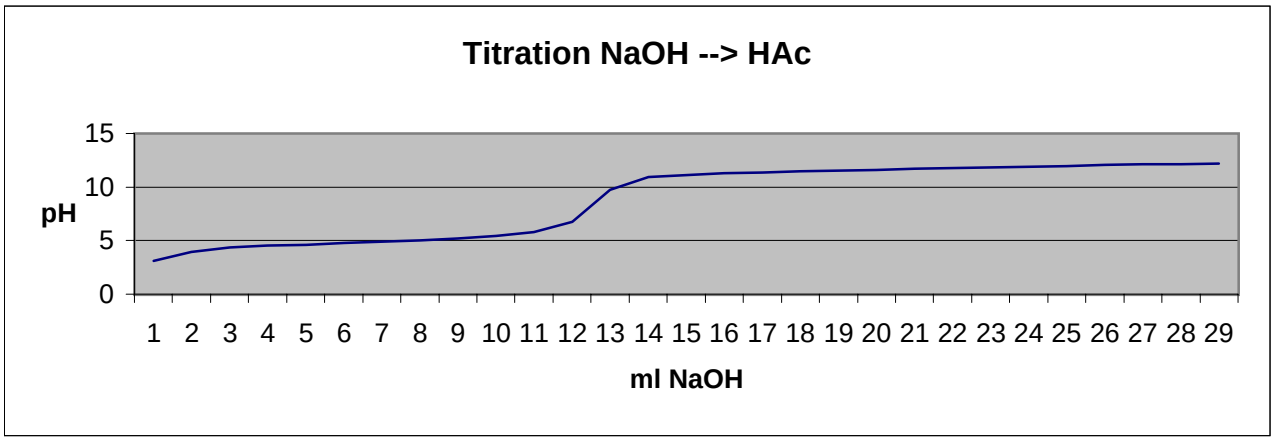
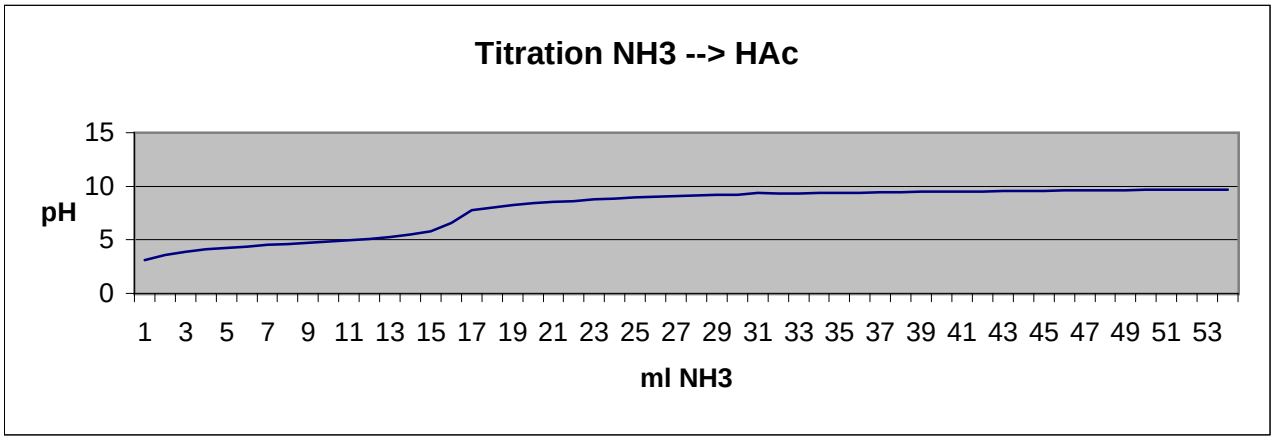
strong->weak

NaOH --> HCl	
ml NaOH	***pH***
0	1.35
1	1.36
2	1.37
3	1.38
4	1.41
5	1.44
6	1.46
7	1.46
8	1.51
9	1.53
10	1.56
11	1.58
12	1.6
13	1.63
14	1.68
15	1.7
16	1.73
17	1.76
18	1.8
19	1.84
20	1.88
21	1.93
22	1.968
23	2.05
24	2.11
25	2.19
25.5	2.25
26	2.3
26.5	2.37
27	2.43
27.5	2.52
28	2.64
28.5	2.82
29	3.04
29.5	3.96
30	6.77
30.5	9.25
31	9.99
31.5	10.61
32	10.87
32.5	11.01
33	11.14
34	11.3
35	11.43
36	11.51
37	11.58
38	11.63
39	11.69
40	11.73
44	11.86
46	11.91
48	11.96
50	11.99

strong->strong

NaOH --> HAc	
ml NaOH	***pH***
0	3.08
2	3.97
4	4.34
5	4.52
6	4.63
7	4.76
8	4.89
9	5.03
10	5.19
11	5.41
12	5.79
13	6.76
13.5	9.75
14.5	10.93
15	11.14
15.5	11.27
16	11.36
17	11.48
18	11.56
19	11.62
21	11.71
23	11.78
25	11.84
27	11.89
30	11.97
35	12.05
40	12.11
45	12.15
50	12.19

weak->weak

NH3 --> HAc	
ml NH3	***pH***
0	3.08
1	3.6
2	3.88
3	4.11
4	4.24
5	4.37
6	4.54
7	4.62
8	4.73
9	4.84
10	4.97
11	5.1
12	5.27
13	5.47
14	5.8
15	6.56
15.5	7.74
16	8.01
16.5	8.24
17	8.43
17.5	8.55
18	8.63
19	8.77
20	8.87
21	8.96
22	9.03
23	9.09
24	9.16
25	9.2
26	9.23
27	9.36
28	9.3
29	9.33
30	9.36
31	9.38
32	9.41
33	9.44
34	9.45
35	9.48
36	9.49
37	9.52
38	9.53
39	9.56
40	9.58
41	9.59
42	9.6
43	9.62
44	9.63
45	9.64
46	9.66
47	9.68
48	9.68
49	9.69
50	9.7

Diagrams to the titrations in lab 8