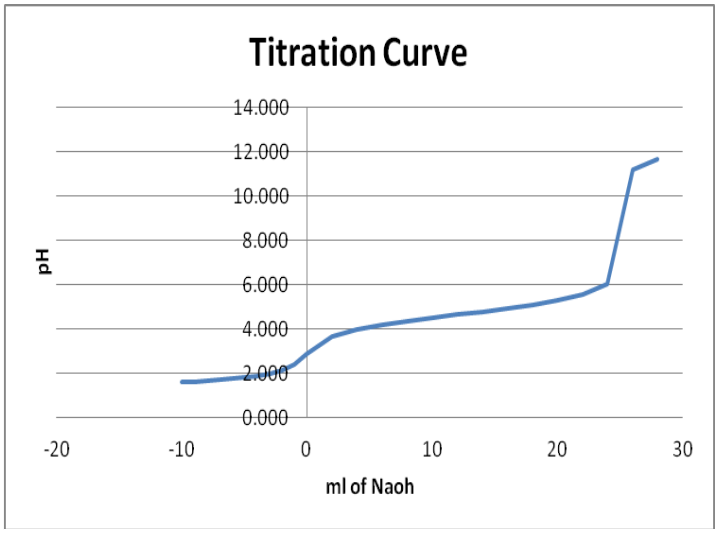
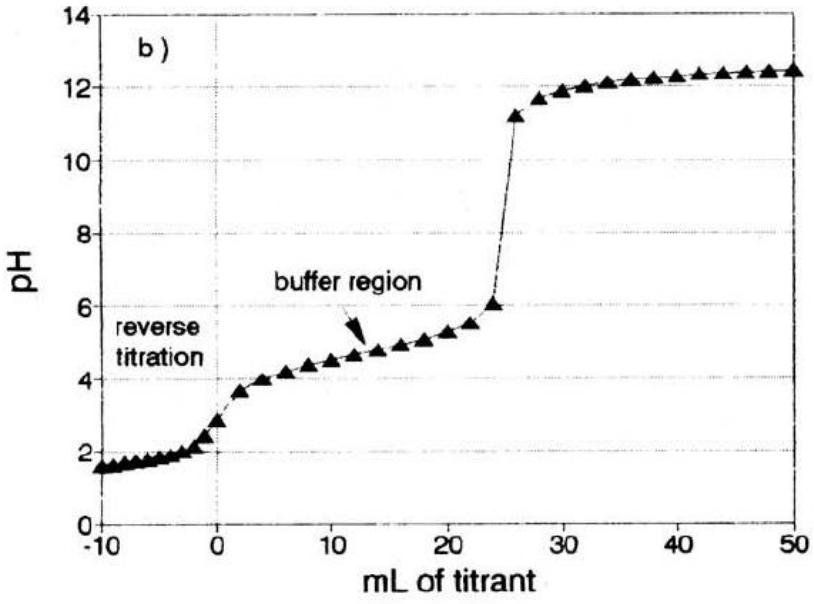
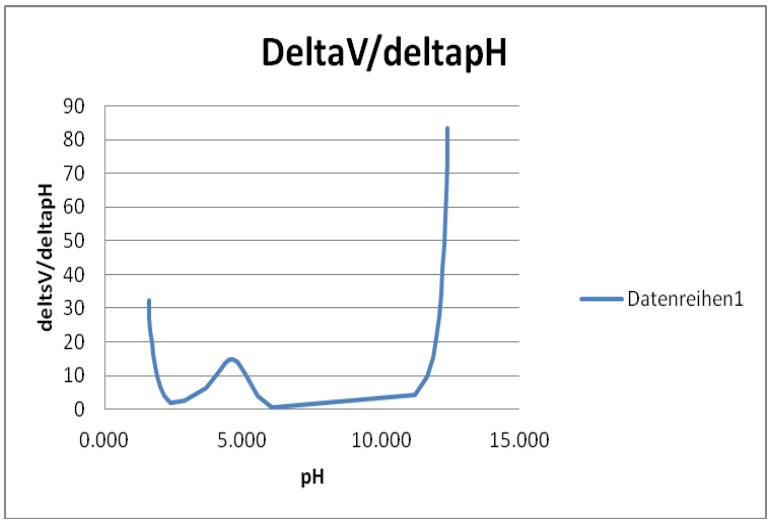
25 ml 0.100 M Acetic Acid

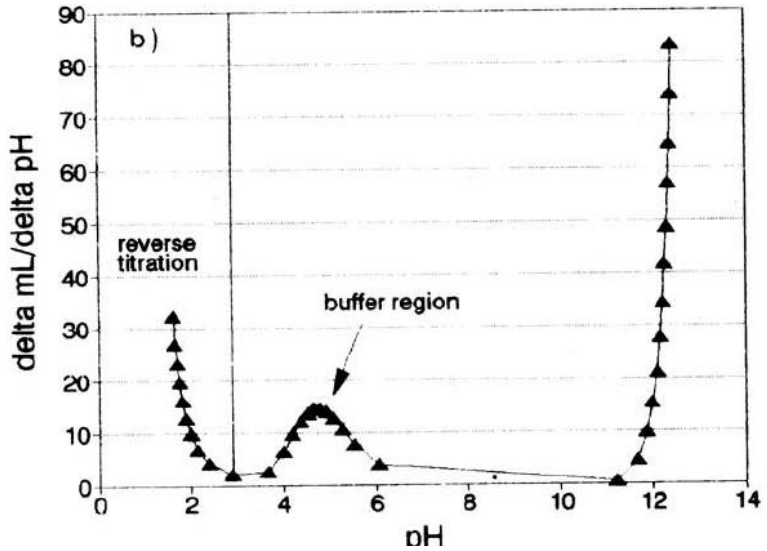
ml titrant	pH, HOAc sol	dpH	dV		dV/dpH	ß	ß/2.3
-10	1.596	0.031		1	32.2580645	0.21505376	0.09350164
-9	1.627	0.037		1	27.027027	0.16891892	0.07344301
-8	1.664	0.043		1	23.255814	0.13679891	0.05947779
-7	1.707	0.051		1	19.6078431	0.10893246	0.04736194
-6	1.758	0.062		1	16.1290323	0.08488964	0.03690854
-5	1.820	0.078		1	12.8205128	0.06410256	0.02787068
-4	1.898	0.103		1	9.70873786	0.04623209	0.02010091
-3	2.001	0.149		1	6.7114094	0.03050641	0.01326365
-2	2.150	0.244		1	4.09836066	0.01781896	0.00774737
-1	2.394	0.487		1	2.05338809	0.00855578	0.00371991
0	2.881	0.79		2	2.53164557	0.01012658	0.00440286
2	3.671	0.319		2	6.26959248	0.02322071	0.01009596
4	3.990	0.209		2	9.56937799	0.03299786	0.01434689
6	4.199	0.167		2	11.9760479	0.03863241	0.0167967
8	4.366	0.147		2	13.6054422	0.04122861	0.01792548
10	4.513	0.137		2	14.5985401	0.04171011	0.01813483
12	4.650	0.137		2	14.5985401	0.03945551	0.01715457
14	4.787	0.142		2	14.084507	0.03611412	0.01570179
16	4.929	0.158		2	12.6582278	0.03087373	0.01342336
18	5.087	0.19		2	10.5263158	0.0244798	0.01064339
20	5.277	0.262		2	7.63358779	0.01696353	0.00737545
22	5.539	0.513		2	3.89863548	0.00829497	0.00360651
24	6.052	5.16		2	0.3875969	0.00079101	0.00034392
26	11.212	0.459		2	4.35729847	0.00854372	0.00371466
28	11.671	0.205		2	9.75609756	0.01840773	0.00800336
30	11.876	0.13		2	15.3846154	0.02797203	0.01216175
32	12.006	0.094		2	21.2765957	0.03732736	0.01622929
34	12.100	0.072		2	27.7777778	0.04708098	0.02046999
36	12.172	0.058		2	34.4827586	0.05652911	0.02457787
38	12.230	0.048		2	41.6666667	0.06613757	0.02875546
40	12.278	0.041		2	48.7804878	0.0750469	0.03262909
42	12.319	0.035		2	57.1428571	0.08528785	0.03708167
44	12.354	0.031		2	64.516129	0.09350164	0.04065289
46	12.385	0.027		2	74.0740741	0.10432968	0.04536073
48	12.412	0.024		2	83.3333333	0.11415525	0.04963272
50	12.436						

So I just calculated ß from dV/dpH by converting ml into mol/litre, as ß is $mol.L^{-1}.pH^{-1}$. After that it was just plotting:


Titration Curve
14.000
12.000
10.000
8.000
6.000
4.000
2.000
0.000
pH
-20
-10
0
10
20
30
ml of Naoh


b)
14
12
10
8
6
4
2
0
pH
buffer region
reverse
titration
-10
0
10
20
30
40
50
mL of titrant

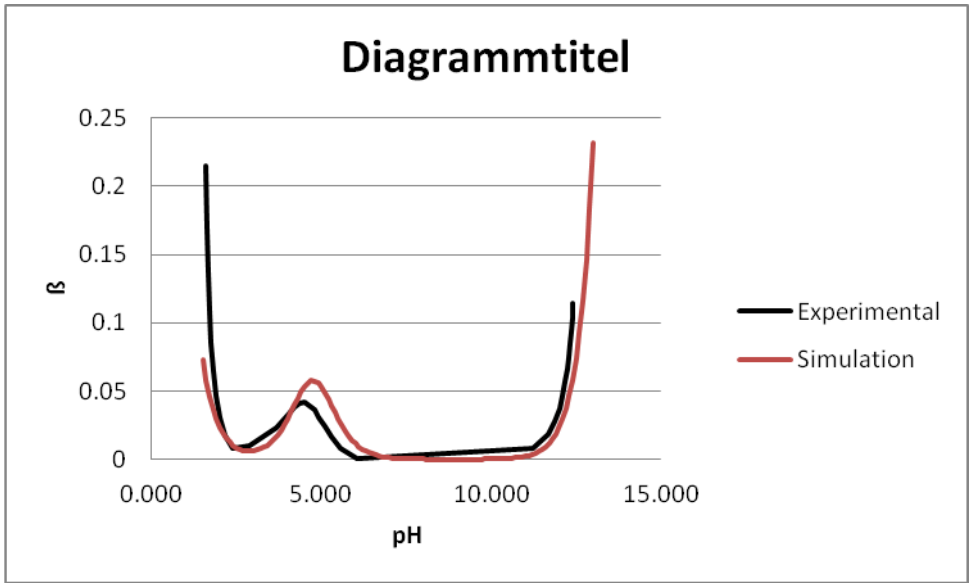

DeltaV/deltapH
90
80
70
60
50
40
30
20
10
0
deltsV/deltapH
0.000
5.000
10.000
15.000
pH
Datenreihen1



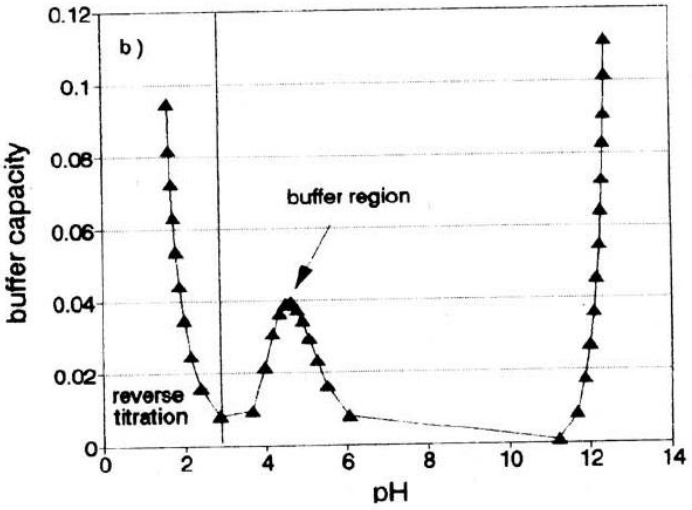
Corresponding buffer capacity cuves:

By slope method:

By ß method:



And from Litrature:



The curve seems to be pretty good.