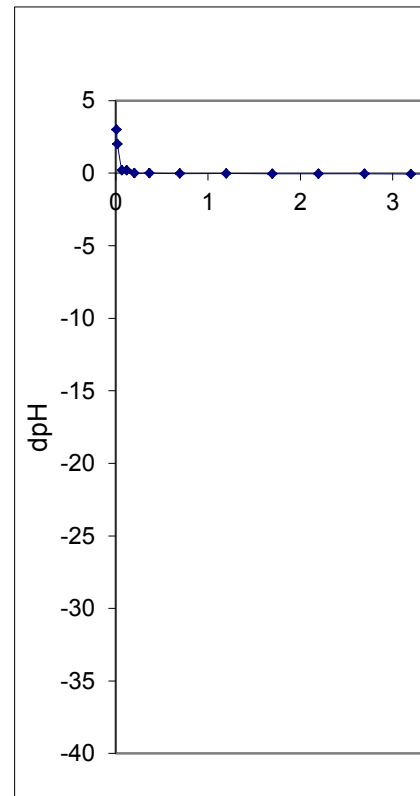
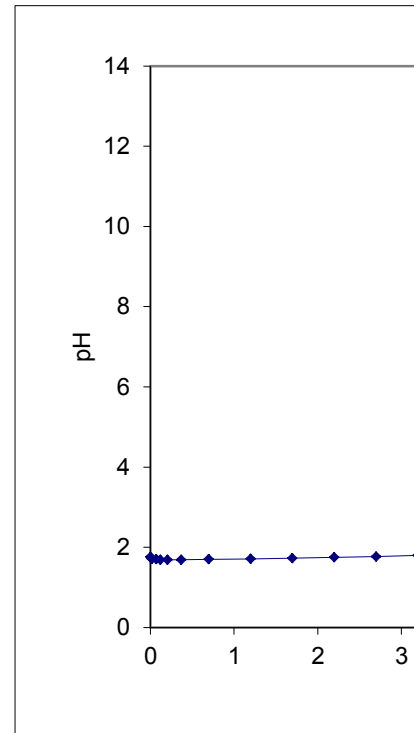


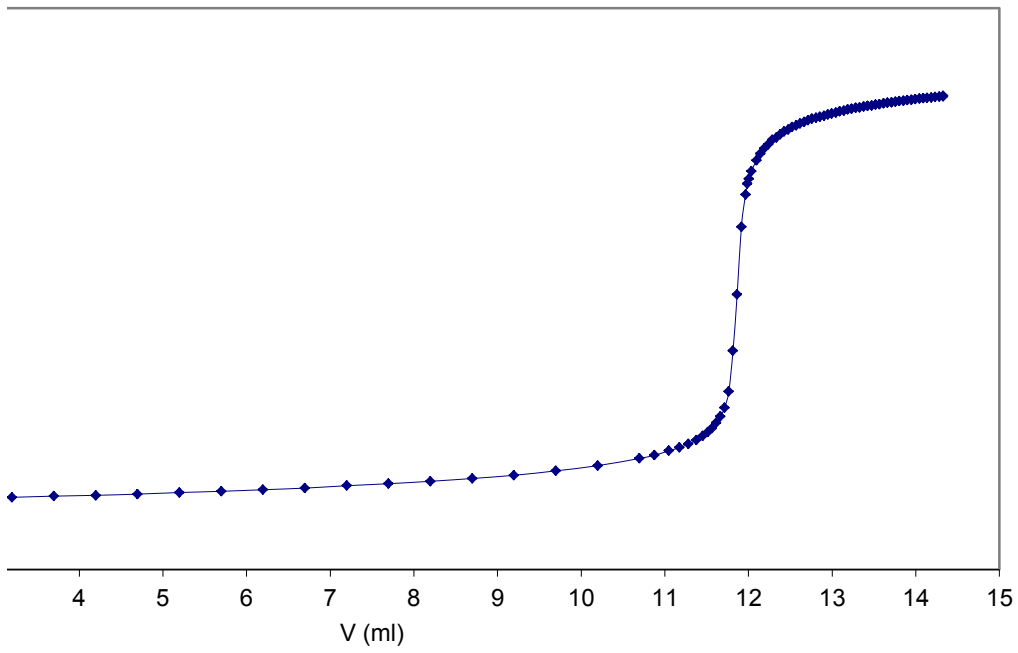
HCl 1

| V | pH | dpH | d'pH |
|---------|-------|----------|----------|
| 0 | 1.76 | | |
| 0.01 | 1.73 | 3 | |
| 0.02 | 1.71 | 2 | -100 |
| 0.07 | 1.7 | 0.2 | -36 |
| 0.12 | 1.69 | 0.2 | 1.11E-15 |
| 0.2025 | 1.69 | 0 | -2.42424 |
| 0.3675 | 1.69 | 0 | 0 |
| 0.6975 | 1.7 | -0.0303 | -0.09183 |
| 1.1975 | 1.71 | -0.02 | 0.020606 |
| 1.6975 | 1.73 | -0.04 | -0.04 |
| 2.1975 | 1.75 | -0.04 | -4.2E-17 |
| 2.6975 | 1.77 | -0.04 | 4.16E-17 |
| 3.1975 | 1.8 | -0.06 | -0.04 |
| 3.6975 | 1.83 | -0.06 | 0 |
| 4.1975 | 1.85 | -0.04 | 0.04 |
| 4.6975 | 1.88 | -0.06 | -0.04 |
| 5.1975 | 1.92 | -0.08 | -0.04 |
| 5.6975 | 1.95 | -0.06 | 0.04 |
| 6.1975 | 1.99 | -0.08 | -0.04 |
| 6.6975 | 2.03 | -0.08 | 8.88E-16 |
| 7.1975 | 2.09 | -0.12 | -0.08 |
| 7.6975 | 2.14 | -0.1 | 0.04 |
| 8.1975 | 2.2 | -0.12 | -0.04 |
| 8.6975 | 2.27 | -0.14 | -0.04 |
| 9.1975 | 2.35 | -0.16 | -0.04 |
| 9.6975 | 2.46 | -0.22 | -0.12 |
| 10.1975 | 2.59 | -0.26 | -0.08 |
| 10.6975 | 2.77 | -0.36 | -0.2 |
| 10.8775 | 2.85 | -0.44444 | -0.46914 |
| 11.0475 | 2.96 | -0.64706 | -1.19185 |
| 11.175 | 3.04 | -0.62745 | 0.153787 |
| 11.2825 | 3.13 | -0.83721 | -1.95124 |
| 11.3775 | 3.23 | -1.05263 | -2.2676 |
| 11.455 | 3.33 | -1.29032 | -3.06698 |
| 11.515 | 3.43 | -1.66667 | -6.2724 |
| 11.565 | 3.52 | -1.8 | -2.66667 |
| 11.615 | 3.66 | -2.8 | -20 |
| 11.665 | 3.82 | -3.2 | -8 |
| 11.715 | 4.03 | -4.2 | -20 |
| 11.765 | 4.44 | -8.2 | -80 |
| 11.815 | 5.45 | -20.2 | -240 |
| 11.865 | 6.86 | -28.2 | -160 |
| 11.915 | 8.54 | -33.6 | -108 |
| 11.965 | 9.35 | -16.2 | 348 |
| 11.985 | 9.62 | -13.5 | 135 |
| 12.005 | 9.74 | -6 | 375 |
| 12.035 | 9.93 | -6.33333 | -11.1111 |
| 12.095 | 10.2 | -4.5 | 30.55556 |
| 12.1425 | 10.37 | -3.57895 | 19.39058 |
| 12.19 | 10.5 | -2.73684 | 17.72853 |
| 12.2375 | 10.6 | -2.10526 | 13.2964 |
| 12.285 | 10.71 | -2.31579 | -4.43213 |
| 12.3325 | 10.77 | -1.26316 | 22.16066 |

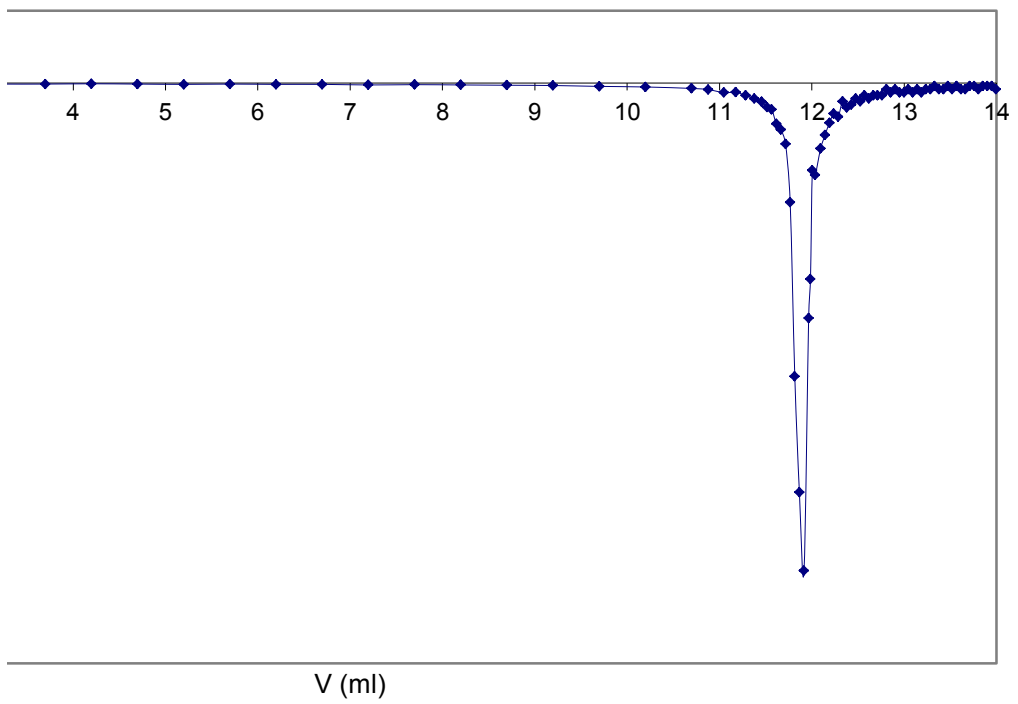


| | | | |
|---------|-------|----------|----------|
| 12.38 | 10.85 | -1.68421 | -8.86427 |
| 12.4275 | 10.92 | -1.47368 | 4.432133 |
| 12.475 | 10.97 | -1.05263 | 8.864266 |
| 12.5225 | 11.03 | -1.26316 | -4.43213 |
| 12.57 | 11.07 | -0.84211 | 8.864266 |
| 12.6175 | 11.12 | -1.05263 | -4.43213 |
| 12.665 | 11.16 | -0.84211 | 4.432133 |
| 12.7125 | 11.2 | -0.84211 | 1.45E-12 |
| 12.76 | 11.24 | -0.84211 | -1.4E-12 |
| 12.8075 | 11.26 | -0.42105 | 8.864266 |
| 12.855 | 11.29 | -0.63158 | -4.43213 |
| 12.9025 | 11.31 | -0.42105 | 4.432133 |
| 12.95 | 11.34 | -0.63158 | -4.43213 |
| 12.9975 | 11.37 | -0.63158 | 4.98E-13 |
| 13.045 | 11.39 | -0.42105 | 4.432133 |
| 13.0925 | 11.42 | -0.63158 | -4.43213 |
| 13.14 | 11.44 | -0.42105 | 4.432133 |
| 13.1875 | 11.47 | -0.63158 | -4.43213 |
| 13.235 | 11.49 | -0.42105 | 4.432133 |
| 13.2825 | 11.51 | -0.42105 | 3.32E-13 |
| 13.33 | 11.52 | -0.21053 | 4.432133 |
| 13.3775 | 11.54 | -0.42105 | -4.43213 |
| 13.425 | 11.56 | -0.42105 | -4.6E-13 |
| 13.4725 | 11.57 | -0.21053 | 4.432133 |
| 13.52 | 11.59 | -0.42105 | -4.43213 |
| 13.5675 | 11.6 | -0.21053 | 4.432133 |
| 13.615 | 11.62 | -0.42105 | -4.43213 |
| 13.6625 | 11.64 | -0.42105 | -7.9E-13 |
| 13.71 | 11.65 | -0.21053 | 4.432133 |
| 13.7575 | 11.66 | -0.21053 | -1.7E-13 |
| 13.805 | 11.68 | -0.42105 | -4.43213 |
| 13.8525 | 11.69 | -0.21053 | 4.432133 |
| 13.9 | 11.7 | -0.21053 | 1.66E-13 |
| 13.9475 | 11.71 | -0.21053 | -9.5E-13 |
| 13.995 | 11.73 | -0.42105 | -4.43213 |
| 14.0425 | 11.74 | -0.21053 | 4.432133 |
| 14.09 | 11.75 | -0.21053 | -1.7E-13 |
| 14.1375 | 11.76 | -0.21053 | 0 |
| 14.185 | 11.77 | -0.21053 | 1.66E-13 |
| 14.2325 | 11.78 | -0.21053 | -1.7E-13 |
| 14.28 | 11.79 | -0.21053 | 0 |
| 14.3275 | 11.8 | -0.21053 | -6.2E-13 |
| 14.3275 | 11.81 | | |
| 14.3275 | 11.81 | | |
| 14.3275 | 11.8 | | |

Titracni krivka HCl 1

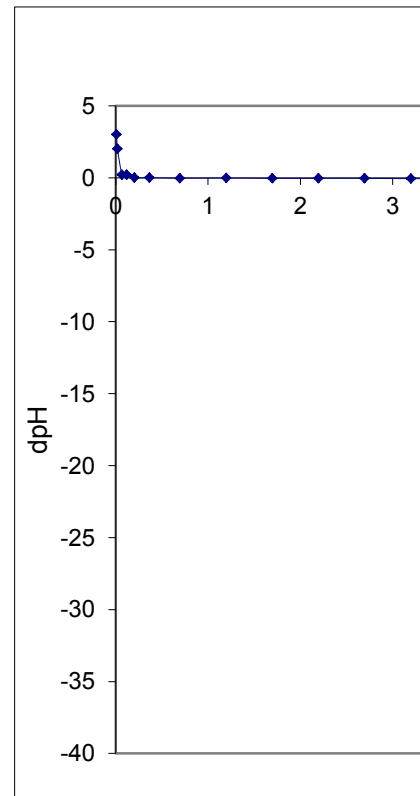
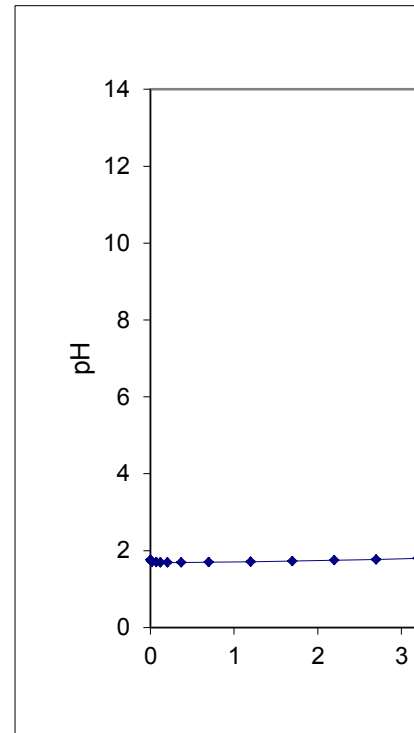


Derivacni krivka HCl 1



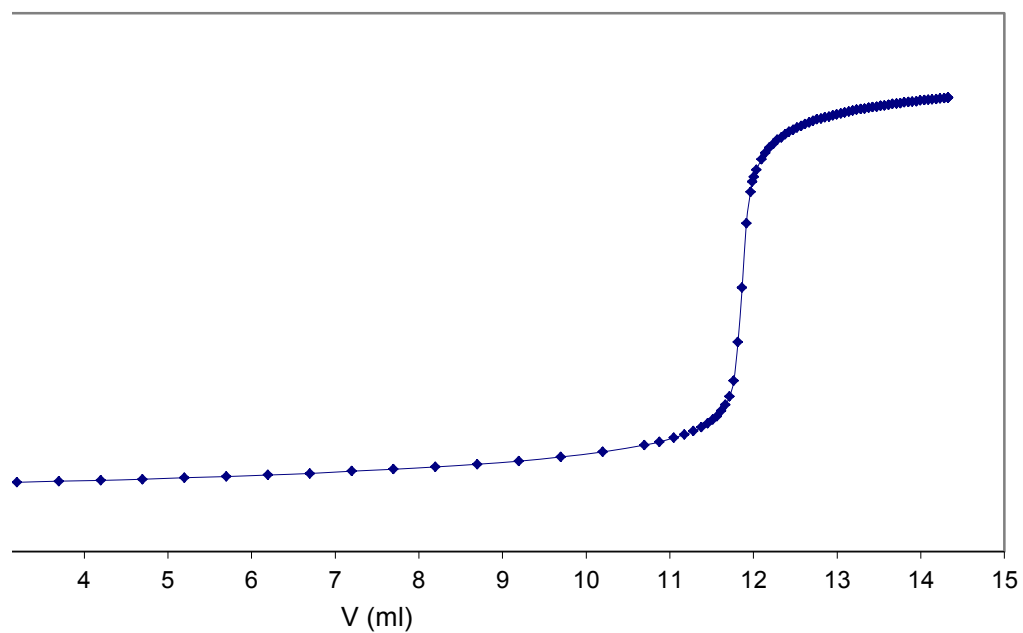
HCl 2

| V | pH | dpH | d'pH |
|---------|-------|----------|----------|
| 0 | 1.76 | | |
| 0.01 | 1.73 | 3 | |
| 0.02 | 1.71 | 2 | -100 |
| 0.07 | 1.7 | 0.2 | -36 |
| 0.12 | 1.69 | 0.2 | 1.11E-15 |
| 0.2025 | 1.69 | 0 | -2.42424 |
| 0.3675 | 1.69 | 0 | 0 |
| 0.6975 | 1.7 | -0.0303 | -0.09183 |
| 1.1975 | 1.71 | -0.02 | 0.020606 |
| 1.6975 | 1.73 | -0.04 | -0.04 |
| 2.1975 | 1.75 | -0.04 | -4.2E-17 |
| 2.6975 | 1.77 | -0.04 | 4.16E-17 |
| 3.1975 | 1.8 | -0.06 | -0.04 |
| 3.6975 | 1.83 | -0.06 | 0 |
| 4.1975 | 1.85 | -0.04 | 0.04 |
| 4.6975 | 1.88 | -0.06 | -0.04 |
| 5.1975 | 1.92 | -0.08 | -0.04 |
| 5.6975 | 1.95 | -0.06 | 0.04 |
| 6.1975 | 1.99 | -0.08 | -0.04 |
| 6.6975 | 2.03 | -0.08 | 8.88E-16 |
| 7.1975 | 2.09 | -0.12 | -0.08 |
| 7.6975 | 2.14 | -0.1 | 0.04 |
| 8.1975 | 2.2 | -0.12 | -0.04 |
| 8.6975 | 2.27 | -0.14 | -0.04 |
| 9.1975 | 2.35 | -0.16 | -0.04 |
| 9.6975 | 2.46 | -0.22 | -0.12 |
| 10.1975 | 2.59 | -0.26 | -0.08 |
| 10.6975 | 2.77 | -0.36 | -0.2 |
| 10.8775 | 2.85 | -0.44444 | -0.46914 |
| 11.0475 | 2.96 | -0.64706 | -1.19185 |
| 11.175 | 3.04 | -0.62745 | 0.153787 |
| 11.2825 | 3.13 | -0.83721 | -1.95124 |
| 11.3775 | 3.23 | -1.05263 | -2.2676 |
| 11.455 | 3.33 | -1.29032 | -3.06698 |
| 11.515 | 3.43 | -1.66667 | -6.2724 |
| 11.565 | 3.52 | -1.8 | -2.66667 |
| 11.615 | 3.66 | -2.8 | -20 |
| 11.665 | 3.82 | -3.2 | -8 |
| 11.715 | 4.03 | -4.2 | -20 |
| 11.765 | 4.44 | -8.2 | -80 |
| 11.815 | 5.45 | -20.2 | -240 |
| 11.865 | 6.86 | -28.2 | -160 |
| 11.915 | 8.54 | -33.6 | -108 |
| 11.965 | 9.35 | -16.2 | 348 |
| 11.985 | 9.62 | -13.5 | 135 |
| 12.005 | 9.74 | -6 | 375 |
| 12.035 | 9.93 | -6.33333 | -11.1111 |
| 12.095 | 10.2 | -4.5 | 30.55556 |
| 12.1425 | 10.37 | -3.57895 | 19.39058 |
| 12.19 | 10.5 | -2.73684 | 17.72853 |
| 12.2375 | 10.6 | -2.10526 | 13.2964 |
| 12.285 | 10.71 | -2.31579 | -4.43213 |
| 12.3325 | 10.77 | -1.26316 | 22.16066 |

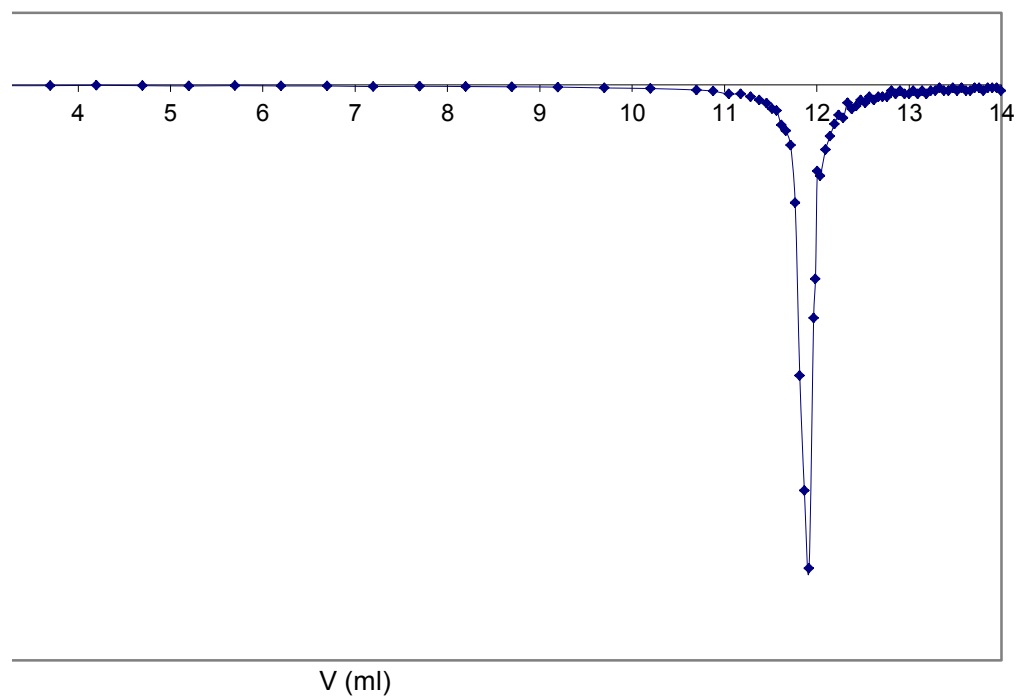


| | | | |
|---------|-------|----------|----------|
| 12.38 | 10.85 | -1.68421 | -8.86427 |
| 12.4275 | 10.92 | -1.47368 | 4.432133 |
| 12.475 | 10.97 | -1.05263 | 8.864266 |
| 12.5225 | 11.03 | -1.26316 | -4.43213 |
| 12.57 | 11.07 | -0.84211 | 8.864266 |
| 12.6175 | 11.12 | -1.05263 | -4.43213 |
| 12.665 | 11.16 | -0.84211 | 4.432133 |
| 12.7125 | 11.2 | -0.84211 | 1.45E-12 |
| 12.76 | 11.24 | -0.84211 | -1.4E-12 |
| 12.8075 | 11.26 | -0.42105 | 8.864266 |
| 12.855 | 11.29 | -0.63158 | -4.43213 |
| 12.9025 | 11.31 | -0.42105 | 4.432133 |
| 12.95 | 11.34 | -0.63158 | -4.43213 |
| 12.9975 | 11.37 | -0.63158 | 4.98E-13 |
| 13.045 | 11.39 | -0.42105 | 4.432133 |
| 13.0925 | 11.42 | -0.63158 | -4.43213 |
| 13.14 | 11.44 | -0.42105 | 4.432133 |
| 13.1875 | 11.47 | -0.63158 | -4.43213 |
| 13.235 | 11.49 | -0.42105 | 4.432133 |
| 13.2825 | 11.51 | -0.42105 | 3.32E-13 |
| 13.33 | 11.52 | -0.21053 | 4.432133 |
| 13.3775 | 11.54 | -0.42105 | -4.43213 |
| 13.425 | 11.56 | -0.42105 | -4.6E-13 |
| 13.4725 | 11.57 | -0.21053 | 4.432133 |
| 13.52 | 11.59 | -0.42105 | -4.43213 |
| 13.5675 | 11.6 | -0.21053 | 4.432133 |
| 13.615 | 11.62 | -0.42105 | -4.43213 |
| 13.6625 | 11.64 | -0.42105 | -7.9E-13 |
| 13.71 | 11.65 | -0.21053 | 4.432133 |
| 13.7575 | 11.66 | -0.21053 | -1.7E-13 |
| 13.805 | 11.68 | -0.42105 | -4.43213 |
| 13.8525 | 11.69 | -0.21053 | 4.432133 |
| 13.9 | 11.7 | -0.21053 | 1.66E-13 |
| 13.9475 | 11.71 | -0.21053 | -9.5E-13 |
| 13.995 | 11.73 | -0.42105 | -4.43213 |
| 14.0425 | 11.74 | -0.21053 | 4.432133 |
| 14.09 | 11.75 | -0.21053 | -1.7E-13 |
| 14.1375 | 11.76 | -0.21053 | 0 |
| 14.185 | 11.77 | -0.21053 | 1.66E-13 |
| 14.2325 | 11.78 | -0.21053 | -1.7E-13 |
| 14.28 | 11.79 | -0.21053 | 0 |
| 14.3275 | 11.8 | -0.21053 | -6.2E-13 |
| 14.3275 | 11.81 | | |
| 14.3275 | 11.81 | | |
| 14.3275 | 11.8 | | |

Titracni krivka HCl 2

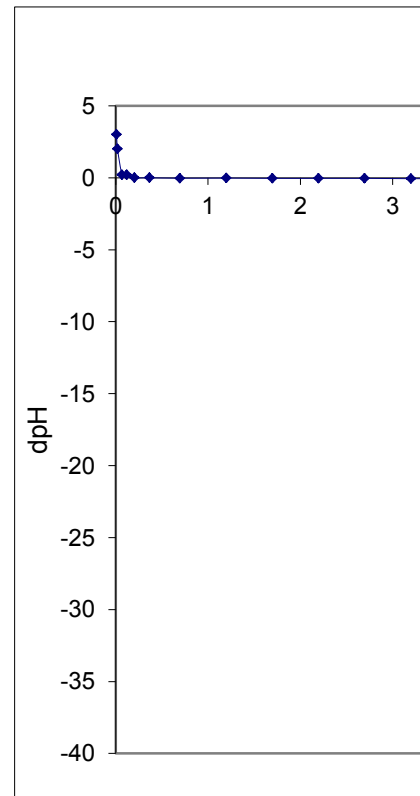
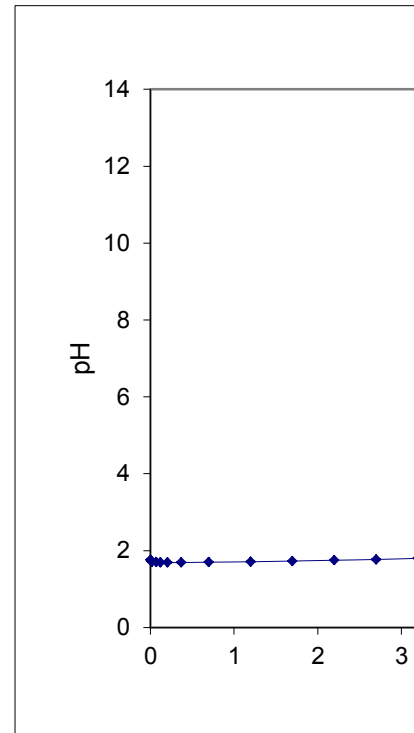


Derivacni krivka HCl 2



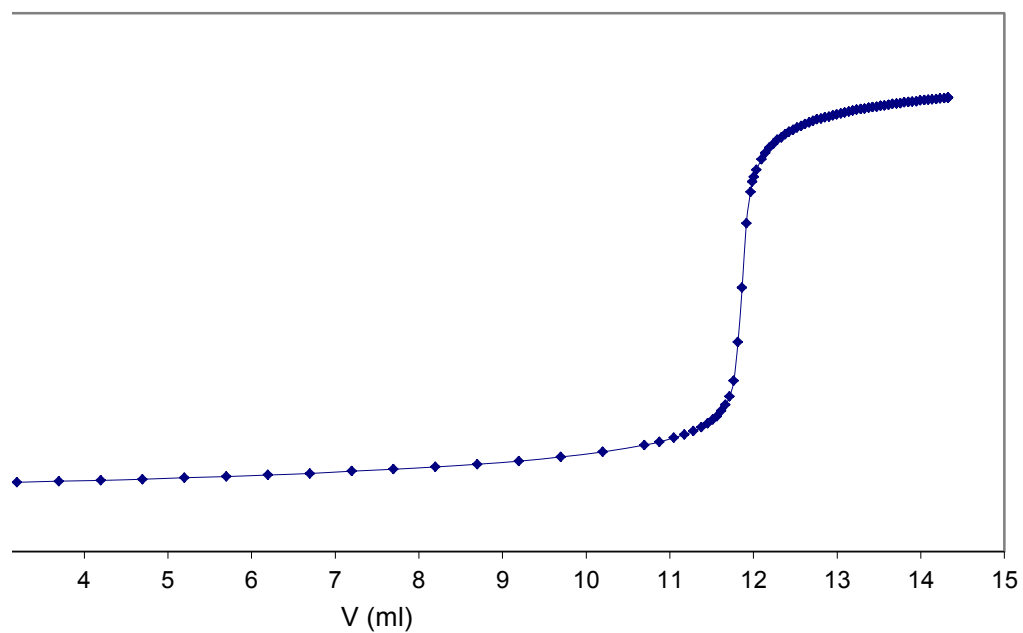
HCl 3

| V | pH | dpH | d'pH |
|---------|-------|----------|----------|
| 0 | 1.76 | | |
| 0.01 | 1.73 | 3 | |
| 0.02 | 1.71 | 2 | -100 |
| 0.07 | 1.7 | 0.2 | -36 |
| 0.12 | 1.69 | 0.2 | 1.11E-15 |
| 0.2025 | 1.69 | 0 | -2.42424 |
| 0.3675 | 1.69 | 0 | 0 |
| 0.6975 | 1.7 | -0.0303 | -0.09183 |
| 1.1975 | 1.71 | -0.02 | 0.020606 |
| 1.6975 | 1.73 | -0.04 | -0.04 |
| 2.1975 | 1.75 | -0.04 | -4.2E-17 |
| 2.6975 | 1.77 | -0.04 | 4.16E-17 |
| 3.1975 | 1.8 | -0.06 | -0.04 |
| 3.6975 | 1.83 | -0.06 | 0 |
| 4.1975 | 1.85 | -0.04 | 0.04 |
| 4.6975 | 1.88 | -0.06 | -0.04 |
| 5.1975 | 1.92 | -0.08 | -0.04 |
| 5.6975 | 1.95 | -0.06 | 0.04 |
| 6.1975 | 1.99 | -0.08 | -0.04 |
| 6.6975 | 2.03 | -0.08 | 8.88E-16 |
| 7.1975 | 2.09 | -0.12 | -0.08 |
| 7.6975 | 2.14 | -0.1 | 0.04 |
| 8.1975 | 2.2 | -0.12 | -0.04 |
| 8.6975 | 2.27 | -0.14 | -0.04 |
| 9.1975 | 2.35 | -0.16 | -0.04 |
| 9.6975 | 2.46 | -0.22 | -0.12 |
| 10.1975 | 2.59 | -0.26 | -0.08 |
| 10.6975 | 2.77 | -0.36 | -0.2 |
| 10.8775 | 2.85 | -0.44444 | -0.46914 |
| 11.0475 | 2.96 | -0.64706 | -1.19185 |
| 11.175 | 3.04 | -0.62745 | 0.153787 |
| 11.2825 | 3.13 | -0.83721 | -1.95124 |
| 11.3775 | 3.23 | -1.05263 | -2.2676 |
| 11.455 | 3.33 | -1.29032 | -3.06698 |
| 11.515 | 3.43 | -1.66667 | -6.2724 |
| 11.565 | 3.52 | -1.8 | -2.66667 |
| 11.615 | 3.66 | -2.8 | -20 |
| 11.665 | 3.82 | -3.2 | -8 |
| 11.715 | 4.03 | -4.2 | -20 |
| 11.765 | 4.44 | -8.2 | -80 |
| 11.815 | 5.45 | -20.2 | -240 |
| 11.865 | 6.86 | -28.2 | -160 |
| 11.915 | 8.54 | -33.6 | -108 |
| 11.965 | 9.35 | -16.2 | 348 |
| 11.985 | 9.62 | -13.5 | 135 |
| 12.005 | 9.74 | -6 | 375 |
| 12.035 | 9.93 | -6.33333 | -11.1111 |
| 12.095 | 10.2 | -4.5 | 30.55556 |
| 12.1425 | 10.37 | -3.57895 | 19.39058 |
| 12.19 | 10.5 | -2.73684 | 17.72853 |
| 12.2375 | 10.6 | -2.10526 | 13.2964 |
| 12.285 | 10.71 | -2.31579 | -4.43213 |
| 12.3325 | 10.77 | -1.26316 | 22.16066 |



| | | | |
|---------|-------|----------|----------|
| 12.38 | 10.85 | -1.68421 | -8.86427 |
| 12.4275 | 10.92 | -1.47368 | 4.432133 |
| 12.475 | 10.97 | -1.05263 | 8.864266 |
| 12.5225 | 11.03 | -1.26316 | -4.43213 |
| 12.57 | 11.07 | -0.84211 | 8.864266 |
| 12.6175 | 11.12 | -1.05263 | -4.43213 |
| 12.665 | 11.16 | -0.84211 | 4.432133 |
| 12.7125 | 11.2 | -0.84211 | 1.45E-12 |
| 12.76 | 11.24 | -0.84211 | -1.4E-12 |
| 12.8075 | 11.26 | -0.42105 | 8.864266 |
| 12.855 | 11.29 | -0.63158 | -4.43213 |
| 12.9025 | 11.31 | -0.42105 | 4.432133 |
| 12.95 | 11.34 | -0.63158 | -4.43213 |
| 12.9975 | 11.37 | -0.63158 | 4.98E-13 |
| 13.045 | 11.39 | -0.42105 | 4.432133 |
| 13.0925 | 11.42 | -0.63158 | -4.43213 |
| 13.14 | 11.44 | -0.42105 | 4.432133 |
| 13.1875 | 11.47 | -0.63158 | -4.43213 |
| 13.235 | 11.49 | -0.42105 | 4.432133 |
| 13.2825 | 11.51 | -0.42105 | 3.32E-13 |
| 13.33 | 11.52 | -0.21053 | 4.432133 |
| 13.3775 | 11.54 | -0.42105 | -4.43213 |
| 13.425 | 11.56 | -0.42105 | -4.6E-13 |
| 13.4725 | 11.57 | -0.21053 | 4.432133 |
| 13.52 | 11.59 | -0.42105 | -4.43213 |
| 13.5675 | 11.6 | -0.21053 | 4.432133 |
| 13.615 | 11.62 | -0.42105 | -4.43213 |
| 13.6625 | 11.64 | -0.42105 | -7.9E-13 |
| 13.71 | 11.65 | -0.21053 | 4.432133 |
| 13.7575 | 11.66 | -0.21053 | -1.7E-13 |
| 13.805 | 11.68 | -0.42105 | -4.43213 |
| 13.8525 | 11.69 | -0.21053 | 4.432133 |
| 13.9 | 11.7 | -0.21053 | 1.66E-13 |
| 13.9475 | 11.71 | -0.21053 | -9.5E-13 |
| 13.995 | 11.73 | -0.42105 | -4.43213 |
| 14.0425 | 11.74 | -0.21053 | 4.432133 |
| 14.09 | 11.75 | -0.21053 | -1.7E-13 |
| 14.1375 | 11.76 | -0.21053 | 0 |
| 14.185 | 11.77 | -0.21053 | 1.66E-13 |
| 14.2325 | 11.78 | -0.21053 | -1.7E-13 |
| 14.28 | 11.79 | -0.21053 | 0 |
| 14.3275 | 11.8 | -0.21053 | -6.2E-13 |
| 14.3275 | 11.81 | | |
| 14.3275 | 11.81 | | |
| 14.3275 | 11.8 | | |

Titracni krivka HCl 3



Derivacni krivka HCl 3

