

| CH3COOH |          |   |
|---------|----------|---|
| pKa     | 4,75     |   |
| Ka      | 1,78E-05 |   |
| C       | 1,00E-02 | M |

| pH   | [HA]      | [A-]      | [H+]      | [OH-]     |
|------|-----------|-----------|-----------|-----------|
| 0,0  | 1,000E-02 | 1,778E-07 | 1,000E+00 | 1,000E-14 |
| 1,0  | 9,998E-03 | 1,778E-06 | 1,000E-01 | 1,000E-13 |
| 2,0  | 9,982E-03 | 1,775E-05 | 1,000E-02 | 1,000E-12 |
| 3,0  | 9,825E-03 | 1,747E-04 | 1,000E-03 | 1,000E-11 |
| 4,0  | 8,490E-03 | 1,510E-03 | 1,000E-04 | 1,000E-10 |
| 5,0  | 3,599E-03 | 6,401E-03 | 1,000E-05 | 1,000E-09 |
| 6,0  | 5,324E-04 | 9,468E-03 | 1,000E-06 | 1,000E-08 |
| 7,0  | 5,592E-05 | 9,944E-03 | 1,000E-07 | 1,000E-07 |
| 8,0  | 5,620E-06 | 9,994E-03 | 1,000E-08 | 1,000E-06 |
| 9,0  | 5,623E-07 | 9,999E-03 | 1,000E-09 | 1,000E-05 |
| 10,0 | 5,623E-08 | 1,000E-02 | 1,000E-10 | 1,000E-04 |
| 11,0 | 5,623E-09 | 1,000E-02 | 1,000E-11 | 1,000E-03 |
| 12,0 | 5,623E-10 | 1,000E-02 | 1,000E-12 | 1,000E-02 |
| 13,0 | 5,623E-11 | 1,000E-02 | 1,000E-13 | 1,000E-01 |
| 14,0 | 5,623E-12 | 1,000E-02 | 1,000E-14 | 1,000E+00 |

| [HA] + [A-] = C | [H+] · [OH-] = Kw |
|-----------------|-------------------|
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |
| 1,00E-02        | 1,00E-14          |

[H+] = Ka · [HA]/[A-]

| pH   | log [HA] | log [A-] | log [H+] | log [OH-] |
|------|----------|----------|----------|-----------|
| 0,0  | -2,000   | -6,750   | 0,0      | -14,0     |
| 1,0  | -2,000   | -5,750   | -1,0     | -13,0     |
| 2,0  | -2,001   | -4,751   | -2,0     | -12,0     |
| 3,0  | -2,008   | -3,758   | -3,0     | -11,0     |
| 4,0  | -2,071   | -2,821   | -4,0     | -10,0     |
| 5,0  | -2,444   | -2,194   | -5,0     | -9,0      |
| 6,0  | -3,274   | -2,024   | -6,0     | -8,0      |
| 7,0  | -4,252   | -2,002   | -7,0     | -7,0      |
| 8,0  | -5,250   | -2,000   | -8,0     | -6,0      |
| 9,0  | -6,250   | -2,000   | -9,0     | -5,0      |
| 10,0 | -7,250   | -2,000   | -10,0    | -4,0      |
| 11,0 | -8,250   | -2,000   | -11,0    | -3,0      |
| 12,0 | -9,250   | -2,000   | -12,0    | -2,0      |
| 13,0 | -10,250  | -2,000   | -13,0    | -1,0      |
| 14,0 | -11,250  | -2,000   | -14,0    | 0,0       |

| log [A-] /[HA] | pH + pOH = pKw |
|----------------|----------------|
| 3,37           | 14,0           |
| 2,87           | 14,0           |
| 2,37           | 14,0           |
| 1,87           | 14,0           |
| 1,36           | 14,0           |
| 0,90           | 14,0           |
| 0,62           | 14,0           |
| 0,47           | 14,0           |
| 0,38           | 14,0           |
| 0,32           | 14,0           |
| 0,28           | 14,0           |
| 0,24           | 14,0           |
| 0,22           | 14,0           |
| 0,20           | 14,0           |
| 0,18           | 14,0           |

pH = pKa + log [A-]/[HA]

