

Sodium acetate buffer, 0.1 M

Solution A: 11.55 ml glacial acetic acid/liter (0.2 M).

Solution B: 27.2 g sodium acetate ($\text{NaC}_2\text{H}_3\text{O}_2 \cdot 3\text{H}_2\text{O}$)/liter (0.2 M).

Referring to [Table A.2.2](#) for desired pH, mix the indicated volumes of solutions A and B, then dilute with H_2O to 100 ml. (See [Potassium acetate buffer](#) recipe for further details.)

Potassium acetate buffer, 0.1 M

Solution A: 11.55 ml glacial acetic acid/liter (0.2 M).

Solution B: 19.6 g potassium acetate ($\text{KC}_2\text{H}_3\text{O}_2$)/liter (0.2 M).

Referring to [Table A.2.2](#) for desired pH, mix the indicated volumes of solutions A and B, then dilute with H_2O to 100 ml.

This may be made as a 5- or 10-fold concentrate by scaling up the amount of potassium acetate in the same volume. Acetate buffers show concentration-dependent pH changes, so check concentrate pH by diluting an aliquot to the final concentration.

To prepare buffers with pH intermediate between the points listed in [Table A.2.2](#), prepare closest higher pH, then titrate with solution A.

Table A.2.2 Preparation of 0.1 M Sodium and Potassium Acetate Buffers^a

Desired pH	Solution A (ml)	Solution B (ml)
3.6	46.3	3.7
3.8	44.0	6.0
4.0	41.0	9.0
4.2	36.8	13.2
4.4	30.5	19.5
4.6	25.5	24.5
4.8	20.0	30.0
5.0	14.8	35.2
5.2	10.5	39.5
5.4	8.8	41.2
5.6	4.8	45.2

^a Adapted by permission from CRC, 1975.