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# Glycine-Sodium Hydroxide Buffer

In 1 collection

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1 Works for me dx.doi.org/10.17504/protocols.io.bfyjjpun

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ABSTRACT

A buffer solution has the function of resisting changes in pH even when adding powerful acids or bases. However, in the physiological environment the buffered system also provides cofactors for enzymatic reactions, critical salts and even essential nutrients for cells and tissues. Therefore, when trying to reproduce biological conditions in vitro, we must make the appropriate choice of the buffer. After all, it will provide the appropriate medium in which reactions will occur.

MATERIALS TEXT

- Deionized Water
- pH Meter (sensitive)
- Glycine
- Sodium Hydroxide

SAFETY WARNINGS

Wear personal protective equipment: gloves, lab coat and mask.

BEFORE STARTING

Organize your workspace.

Make sure all solutions and equipment are available.

## Glycine-Sodium Hydroxide Buffer

1

pH: pH **8.6** to pH **10.6**

(a) 0.1 M Glycine; 7.5 g $L^{-1}$ (M.W.: 75.0 g $mol^{-1}$)
(b) 0.1 M Sodium hydroxide; 4.0 g $L^{-1}$ (M.W.: 40.0 g $mol^{-1}$)

Mix **50 ml glycine** and indicated volume of sodium hydroxide solutions.

| **mL of Sodium hydroxide** | 4.0 | 8.8 | 16.8 | 27.2 | 32.0 | 38.6 | 45.5 |
|---|---|---|---|---|---|---|---|
| **pH** | 8.6 | 9.0 | 9.4 | 9.8 | 10.0 | 10.4 | 10.6 |

2 Adjust the final volume to **200 ml** with deionized water.

3 Adjust the final pH using a sensitive pH meter



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