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Tris-HCl Buffer

 In 1 collection

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Protocol status: Working

We use this protocol and it's working

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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

- Deionized Water
- pH Meter (sensitive)
- Tris(hydroxymethyl)aminomethane
- Hydrochloric Acid

Safety warnings

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

Before start

Organize your workspace.

Make sure all solutions and equipment are available.




Tris-HCl Buffer

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Note

pH range:  7.2 to  9.0

- (a) 0.1 M Tris(hydroxymethyl)aminomethane; 12.1 g L⁻¹ (M.W.: 121.0 g mol⁻¹)
(b) 0.1 M Hydrochloric acid

Mix  50 mL Tris(hydroxymethyl)aminomethane and indicated volume of hydrochloric acid.

mL of HCl	44.2	41.4	38.4	32.5	21.9	12.2	5.0
pH	7.2	7.4	7.6	7.8	8.2	8.6	9.0

2 Adjust the final volume to  200 mL with deionized water.

3 Adjust the final pH using a sensitive pH meter.