HEPES Buffer Solution (1M)

831106

Volume: 100 ml

Storage: +2°C to +8°C

Sterility: Sterile-filtered

HEPES Buffer Solution (1 M), also known as N-2-hydroxyethylpiperazine-N-2-ethanesulfonic acid, is a zwitterionic organic buffering agent widely used in cell culture media. It is designed to maintain stable pH conditions in the physiological range of 6.7 to 8.6, supporting optimal cellular function during in vitro applications.

Application and Benefits

HEPES provides reliable buffering capacity in cell culture systems, particularly when cells are handled outside a CO_2 incubator. The addition of 10–25 mM HEPES to culture media offers enhanced pH stability during extended manipulation periods, helping to maintain consistent experimental conditions.

This buffer is membrane-impermeable, has minimal interference with biochemical reactions, and demonstrates strong chemical and enzymatic stability. These properties make it suitable for a wide range of cell culture and biochemical applications.

Formulation and Usage

The solution is supplied as a 1 M concentrate prepared in cell culture–grade water and is sterile-filtered for use in contamination-sensitive environments. It can be diluted to the desired working concentration depending on application requirements. Store at +2°C to +8°C and handle under aseptic conditions to preserve product integrity.

For research use only. Not for use in diagnostic or therapeutic procedures. Not for use in humans or animals.

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