

PRODUCT DATA SHEET

HEPES Buffer Solution (1M)

Description

N-2-hydroxyethylpiperazine-N'-2-ethanesulfonic acid (HEPES) is a zwitterionic buffer with a pK_a of 7.3 at 37°C. HEPES may be added to cell culture media at a final concentration of 10-25mM to provide additional buffering capacity if required. Concentrations of this organic buffer should be reduced if cytotoxicity is apparent for a specific cell line or primary cell culture.

Media supplemented with HEPES exhibit more effective buffering in the physiological pH range with most cell cultures than media using the normal bicarbonate buffering system alone. However, HEPES should be added in addition to, not instead of, sodium bicarbonate, as it is important to maintain sufficient bicarbonate in the medium for nutritional purposes. Since the buffering capacity of HEPES is independent of the CO₂ concentration, it is an ideal buffer for maintaining the pH of cultures outside of the CO₂ incubator. HEPES buffered media are resistant to rapid, drastic pH changes, but will not prevent pH shifts entirely.

The HEPES Buffer Solution is supplied as a 1M (38.3 g/L) solution, pH 7.3 ± 0.1 in Cell Culture grade water.

Precautions

The HEPES Buffer Solution is hazardous. Review the Material Safety Data Sheet for additional information before handling this product.

Storage and Handling

The HEPES Buffer Solution is supplied in gamma irradiated, sterile PETG or PETE bottles. We recommend that the HEPES Buffer Solution be stored refrigerated at a temperature of 2°C to 8°C. Always use aseptic techniques when handling the HEPES Buffer Solution.

Shipping

The HEPES Buffer Solution is shipped ambient by second day air.

This product is manufactured for research and development purposes only. It is not intended for any human or animal diagnostic, therapeutic or other clinical uses. It is also not for agricultural, food, drug, cosmetic or household use. The use of these products must be supervised by a person technically qualified to handle potentially hazardous material.