

**HEPES Buffer Solution (1M)**

**CAT N°** : SLHE-535-100

**Theoretical pH** :  $7.3 \pm 0.3$

**Osmolality** : > 1000 mOsm/kg

**Colour** : colourless, clear solution

**Storage conditions** : +2°C to +8°C, protected from light

**Shelf life** : 36 months

**Sterility tests :**

- bacteria aerobic-anaerobic
- bacteria strictly anaerobic
- fungi / yeast

**Endotoxin** : < 1 EU/ml

**Composition** : 238.31 g/l of HEPES in distilled water

**Recommended use :**

- Respect storage conditions of the product
- Do not use the product after its expiry date
- Store product in an area protected from light (not necessary for saline solutions).
- Manipulate the product in aseptic conditions (e.g. : under laminar air flow)
- Wear clothes adapted to the manipulation of the product to avoid contamination (e.g. : gloves, mask, hygiene cap, overall...)

The product is intended to be used in vitro, in laboratory only. Do not use it in therapy, human or veterinary applications.

**Application :**

HEPES is used in many media because it has more buffering capacity than sodium bicarbonate at physiological pH (7.2 - 7.4) at 37°C. Sodium bicarbonate is nutritionally necessary for most cells, so HEPES should be added in addition to, not in place of, sodium bicarbonate. It is commonly added at 10 – 25 mM concentrations (higher levels may cause cytotoxicity).

**Indications of deterioration :**

Buffer solution should be clear and free of particulate and flocculent material.

Do not use if buffer solution is cloudy or contains precipitate.

Other evidence of deterioration may include degradation of physical.