

**Earle's balanced salts 10X**  
w/ Calcium w/ Magnesium w/o Sodium Bicarbonate

**CAT N° :** X0112

**Theoretical pH :** 4.2 ± 0.5

**Osmolality :** >1600 mOsm/kg

**Colour :** clear yellow solution

**Storage conditions :** Room temperature

**Shelf life :** 48 months

**Sterility tests :**

- Bacteria in aerobic and anaerobic conditions
- Fungi and yeasts

**Endotoxin :** < 1 EU/ml

**Composition :** Displayed on website; also available on request

**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.

**Applications :**

Earle's Balanced Salt solution is intended for use in the maintenance of mammalian cells where a chemically defined, balanced salt solution provides an environment that will maintain the structural and physiological integrity of cells in vitro. Earle's salts are designed for the short-term maintenance of cells in a CO<sub>2</sub> environment.

**Uses :**

Supplements, such as antibiotics or sodium bicarbonate should be added as sterile supplements to the buffer solution. Storage conditions and shelf-life of the supplemented product will be affected by the nature of the supplements.

1. Dilute the 10X buffer 1:10 with cell culture grade water. Water temperature should be 15 to 30°C. Do not heat water. Mix completely.
2. While stirring the solution, add 2.2 g/L of sodium bicarbonate to the solution at 1X (sodium bicarbonate in powder: CAT N° P2060 or 29.3ml/L of sodium bicarbonate 7.5% CAT N° L0680).
3. While stirring the solution, adjust if necessary the pH 7.1 –7.6 using 1N HCl or 1N NaOH. For most cells and culture conditions, the optimal pH of this salt solution after filtration is 7.0-7.4
4. Add deionized or distilled water to the solution to bring it to the final volume. To avoid fluctuations in pH, keep the vessel closed until the solution is filtered.
5. Sterilize the solution using a 0.22 micron filter. A peristaltic pump or an inert gas such as nitrogen can be used to provide positive pressure at 3 – 15 psi. Do not use CO<sub>2</sub> gas. Sterile solutions should be dispensed aseptically into sterile containers. Store buffer solution at 15 to 30°C

**Signs 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 colour change or degradation of physical or performance characteristics.