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Technical data sheet

Earle's Balanced Salts Solution

W/Sodium Bicarbonate, W/Phenol Red
W/Calcium, W/Magnesium

Cat. No.: EBSS-500
Theoretical pH: 7.3 ± 0.3
Osmolality: 278 mOsm/kg ± 10 %
Color: Red, clear solution
Storage conditions: Room temperature
Shelf life: 48 months
Sterility: Sterile filtered
Endotoxin: < 1 EU/ml
Composition: Available on request.
Recommended use:

- Respect storage conditions of the product.
- Do not use the product after its expiry date.
- Do not use the product packaging appears damaged or if the seal is broken.
- Store product in an area protected from light.
- 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, … etc.).
- The product is intended to be used in vitro, in laboratory only.
- Do not use it in therapy, human or veterinary applications.

Description:

The first use of a balanced salts solution for cell culture is attribute to Sydney Ringer (1885).
He has developed an inorganic salts solution to maintain the contractility of mammal cardiac cells.
A less specific salts solution has Benne developed by Tyrode for general mammal cells.
« Tyrode's salt solution » was used to dilute protein component of media from natural origin.
Since this time, many other salts solutions have been developed for cell culture Balanced salts solutions have several roles:

- Solution for transportation, dilution, irrigation to maintain intra and extra-cellular osmotic pressure.
- Solution providing water and some inorganic ions for cellular metabolism.
- Solution which associated to a sugar as glucose, provides the principal source of energy for cellular metabolism.
- Buffer solution to maintain a medium in physiological pH conditions (7.2 – 7.6).

Utilization:

- Supplements, such as antibiotics, should be added as sterile supplements to the medium.
- Storage conditions and shelf-life of supplemented products will be affected by the nature of the supplements.

Indications of deterioration:

- Medium should be clear and free of particulate and flocculent material.
- Do not use, if medium is cloudy or contains precipitate.
- Other evidence of deterioration may include color change or degradation of physical or performance characteristics.

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