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### Earle's Balanced Salts Solution (EBSS) w/ Calcium w/ Magnesium

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Product code:  
LM-S2032

<b><u>Theoretical pH :</u></b>	7.7 ± 0.3
<b><u>Osmolality :</u></b>	275 mOsm/kg ± 10 %
<b><u>Colour :</u></b>	red solution
<b><u>Storage conditions :</u></b>	Room temperature
<b><u>Shelf life :</u></b>	48 months
<b><u>Sterility tests :</u></b>	<ul style="list-style-type: none"><li>- Bacteria in aerobic and anaerobic conditions</li><li>- Fungi and yeasts</li></ul>
<b><u>Endotoxin :</u></b>	<1 EU/ml

**Composition :** 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.

## **Description :**

The first use of a balanced salts solution for cell culture is attributed 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 been 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

## **Uses :**

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.

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