

Technical Information

Earle's Balanced Salt Solution 1X With Phenol red and Sodium bicarbonate

Product Code: TL2002

Application: All media used in tissue culture have a basis of a synthetic mixture of inorganic salts known as a physiological or balanced salt solution (BSS). All the physiological salt solutions have been derived from the salt solution originally described by Sydney Ringer (1885). The first balanced salt solution to be developed specifically for supporting the metabolism of mammalian cells was Tyrode's solution. Since then many modifications have been done to obtain better buffering salt solutions and to prevent calcium precipitation.

The function of a salt solution is:

- To maintain the medium within physiological pH range.
- To maintain intracellular and extra cellular osmotic balance.
- Modified with a carbohydrate, such as glucose serves as an energy source for cell metabolism.

Earle's balanced salt solution is designed to equilibrate with a 5% CO₂ in air mixture.

TL2002 is Earle's balanced salt solution with phenol red and sodium bicarbonate hence requires the cells to be grown in a 5% CO₂ environment.

Composition**

Ingredients	mg / Litre
INORGANIC SALTS	
Calcium chloride dihydrate	265.000
Magnesium sulphate anhydrous	97.720
Potassium chloride	400.000
Sodium bicarbonate	2200.00
Sodium chloride	6800.000
Sodium dihydrogen phosphate anhydrous	122.000
OTHERS	
D-Glucose	1000.000
Phenol red sodium salt	11.000

Quality control

Appearance

Red colored, clear solution

pH

7.00 – 7.60

Osmolality in mOsm/Kg H₂O

265.00 – 305.00

Sterility

No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Toxicity test

Passes

Endotoxin Content

NMT 1EU/ml

Storage and Shelf Life

Store at 15-30 °C away from bright light.

Shelf life is 24 months.

Use before expiry date given on the product label.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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