

Technical Information

Hank's Balanced Salt Solution 10X With Phenol red Without Sodium bicarbonate

Product Code: TL2021

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.

Hank's balanced salt solution is designed to equilibrate with air, hence does not require CO₂ air mixture. TL2021 is 10X Hank's balanced salt solution with phenol red. It does not contain sodium bicarbonate. It is designed for use with cells maintained in less CO₂ environment or CO₂ free environment.

Composition**

Ingredients	mg / Litre
INORGANIC SALTS	
Calcium chloride dihydrate	1854.100
Disodium hydrogen phosphate	480.000
Magnesium sulphate anhydrous	977.200
Potassium chloride	4000.000
Potassium dihydrogen phosphate anhydrous	600.000
Sodium chloride	80000.000
OTHERS	
D-Glucose	10000.000
Phenol red sodium salt	110.000

Material required but not provided

Sodium bicarbonate solution 7.5% (TCL1013)

Methodology

1. Add 4.7ml of 7.5% sodium bicarbonate solution (TCL1013) in 1X balanced salt solution prior to use.

Quality control

Appearance

Orangish red colored, clear solution

pH at 10X

5.50 - 6.10

pH at 1X

6.2 – 6.8

Sterility

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

Toxicity test

Passes

Endotoxin Content

NMT 5EU/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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