

Technical Information

Hanks' Balanced Salt Solution 1X With Phenol red Without Sodium bicarbonate

Product Code: TL2019

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.

Hanks' balanced salt solution is designed to equilibrate with air, hence does not require CO₂ air mixture.

TL2019 is Hanks' balanced salt solution with phenol red. It is designed for use with cells maintained in less CO₂ environment or CO₂ free environment. It does not contain sodium bicarbonate.

Composition**

Ingredients	mg / Litre
INORGANIC SALTS	
Calcium chloride dehydrate	185.410
Disodium hydrogen phosphate anhydrous	48.000
Magnesium sulphate anhydrous	97.720
Potassium chloride	400.000
Potassium dihydrogen phosphate anhydrous	60.000
Sodium chloride	8000.000
OTHERS	
D-Glucose	1000.000
Phenol red sodium salt	11.000

Methodology

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

Material required but not provided

- 7.5% sodium bicarbonate solution (TCL1013)

Quality control

Appearance

Orange coloured, clear solution

pH

6.10 – 6.70

Osmolality in mOsm/Kg H₂O

260.00 300.00

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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