

## Technical Information

### Hanks' Balanced Salt Solution 1X With Calcium and Magnesium Without Sodium bicarbonate and Phenol red

#### Product Code: TL2155

**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.
- When modified with a carbohydrate such as glucose, it serves as an energy source for cell metabolism.

Hanks' balanced salt solution is designed to equilibrate with air, hence does not require CO<sub>2</sub> air mixture.

TL2155 is Hanks' balanced salt solution with calcium and magnesium. It is designed for use with cells maintained in less CO<sub>2</sub> environment or CO<sub>2</sub> free environment. It does not contain sodium bicarbonate and Phenol red.

#### Composition\*\*

| Ingredients                           | mg / Litre |
|---------------------------------------|------------|
| <b>INORGANIC SALTS</b>                |            |
| Disodium hydrogen phosphate anhydrous | 48.000     |
| Potassium chloride                    | 400.000    |
| Potassium dihydrogen orthophosphate   | 60.000     |
| Sodium chloride                       | 8000.000   |
| Calcium chloride dihydrate            | 185.410    |
| Magnesium sulphate anhydrous          | 97.720     |
| <b>OTHERS</b>                         |            |
| D-Glucose                             | 1000.000   |

#### 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

Colourless, clear solution

#### pH

6.10-6.70

#### Osmolality in mOsm/Kg H<sub>2</sub>O

245.00-285.00

#### 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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