

# Spinner Salts, Eagle

With Phenol red

Without Calcium chloride and Sodium bicarbonate

**Product Code: TS1011**

## Product Description :

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.

TS1011 is 1X powdered Spinner Salts, Eagle with Phenol red. It does not contain Calcium chloride and Sodium bicarbonate.

## Composition :

Ingredients	mg/L
<b>INORGANIC SALTS</b>	
Magnesium sulphate anhydrous	100.000
Potassium chloride	400.000
Sodium chloride	6800.000
Sodium dihydrogen phosphate anhydrous	1220.000
<b>OTHERS</b>	
D-Glucose	1000.000
Phenol red sodium salt	11.000

## Directions :

1. Suspend 9.5gms in 900ml tissue culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water.
2. Add 2.2gms of Sodium bicarbonate powder or 29.3ml of 7.5% Sodium bicarbonate solution (TCL013) for 1 litre of solution and stir until dissolved.

3. Adjust the pH to 0.2-0.3 pH units below the desired pH using 1N HCl or 1N NaOH since the pH tends to rise during filtration.
4. Make up the final volume to 1000ml with tissue culture grade water.
5. Sterilize the solution immediately by filtering through a sterile membrane filter with a porosity of 0.22 micron or less, using positive pressure rather than vacuum to minimize the loss of carbon dioxide.
6. Aseptically dispense the desired amount of sterile solution into sterile containers.
7. Store the liquid solution at ambient temperature and in dark till use.

## Material required but not provided :

Tissue culture grade water (TCL010)  
Sodium bicarbonate (TC230)  
Sodium bicarbonate Solution (TCL013)  
1N Hydrochloric acid (TCL003)  
1N Sodium hydroxide (TCL002)

## Quality Control:

### Appearance

White to light pink, homogenous powder.

### Solubility

Clear solution at 9.5 gms/L

### pH without Sodium Bicarbonate

4.50 -5.10

### pH with Sodium Bicarbonate

6.60 -7.20

### Osmolality without Sodium Bicarbonate (mOsm/Kg H<sub>2</sub>O)

240.00 -280.00

### Osmolality with Sodium Bicarbonate (mOsm/Kg H<sub>2</sub>O)

260.00 -300.00

### Toxicity test

Passes

**Endotoxin content**

NMT 1EU/ml

**Storage and Shelf Life:**

1. All the powdered salt mixtures and prepared salt solutions should be stored at ambient temperature. Use before the expiry date. In spite of above recommended storage condition certain powdered salts may show some signs of deterioration /degradation in certain instances. This can be indicated by change in colour, change in appearance and presence of particulate matter and haziness after dissolution.
2. Preparation of concentrated solutions is not recommended as salt complexes having low solubility may precipitate in concentrated solutions.
3. If desired, sterile supplements can be added to the sterile solution observing all sterility precautions. Shelf life of the solution will depend on the nature of supplements added to the solution.

Revision : 02 / 2019

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