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Technical Datasheet

Phosphate Buffered Saline, pH 7.4

With 1% Bovine Serum Albumin

Product Code: TS1120

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.

TS1120 is Phosphate Buffered Saline pH 7.4 with 1%Bovine Serum Albumin. It is most commonly used for immunohistology procedures.

Composition:

Ingredients	mg/L
INORGANIC SALTS	
Disodium hydrogen phosphate, anhydrous	795.000
Potassium dihydrogen phosphate	144.000
Sodium chloride	9000.000
OTHERS	
Bovine Serum Albumin	10000.000

Directions:

1. Suspend 19.9 gms in 900 ml tissue culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water. Stir until dissolved.
2. 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.
3. Make up the final volume to 1000ml with tissue culture grade water.
4. 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.
5. Aseptically dispense the desired amount of sterile solution into sterile containers.
6. Store the liquid solution at 2-8°C and in dark till use.

Material required but not provided:

Tissue culture grade water (TCL010)
1N Hydrochloric acid (TCL003)
1N Sodium hydroxide (TCL002)

Quality Control:

Appearance
Off-white to Creamish white, homogenous powder

Solubility
Clear to slightly hazy solution at 19.9 gms/L

pH
7.00 -7.60

Osmolality (mOsm/Kg H_2O)
290.00 -330.00

Toxicity test
Passes

Storage and Shelf Life:

1. All the powdered salt mixtures should be stored ambient temperature and prepared salt solution should be stored at 2-8°C. 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.