HANKS' BALANCED SALTS [HBSS]
Without Sodium Bicarbonate
Product Number **H6136**

Product Description

Although there have been many modifications to the original formulas in efforts to produce fully defined media, salt solutions still play an important role in tissue culture. A salt solution's basic function, to maintain the pH and osmotic balance in the medium and to provide the cells with water and essential inorganic ions, is as valuable today as when it was first developed a century ago.

Components	g/L
Calcium Chloride (anhydrous)	0.1396
Magnesium Sulfate (anhydrous)	0.09767
Potassium Chloride	0.4
Potassium Phosphate Monobasic (anhydrous)	0.06
Sodium Chloride	8.0
Sodium Phosphate Dibasic (anhydrous)	0.04788
D-Glucose	1.0
Phenol Red•Na	0.011

Precautions and Disclaimer

REAGENT
For R&D use only. Not for drug, household or other uses.

Preparation Instructions

Powdered salts are hygroscopic and should be protected from moisture. The entire contents of each package should be used immediately after opening. Preparing a concentrated salt solution is not recommended as precipitates may form. Supplements can be added prior to filtration or introduced aseptically to sterile salt solution.

3. Measure out 90% of final required volume of water. Water temperature should be 15-20˚C.
4. While gently stirring the water, add the powdered medium. Stir until dissolved. Do NOT heat.
5. Rinse original package with a small amount of water to remove all traces of powder. Add to solution in step 2.
6. To the solution in step 3, add 0.35 g sodium bicarbonate or 4.7 ml of sodium bicarbonate solution [7.5%w/v] for each liter of final volume of medium being prepared. Stir until dissolved.
5. While stirring, adjust the pH of the medium to 0.1-0.3 pH units below the desired pH since it may rise during filtration. The use of 1N HCl or 1N NaOH is recommended.
6. Add additional water to bring the solution to final volume.
7. Sterilize immediately by filtration using a membrane with a porosity of 0.22 microns.
8. Aseptically dispense medium into sterile container.

Storage and Stability

Store the dry powdered salts at 2-8 °C under dry conditions and liquid medium at 2-8 °C in the dark. Deterioration of the powdered medium may be recognized by any or all of the following: [1] color change, [2] granulation/clumping, [3] insolubility. Deterioration of the liquid medium may be recognized by any or all of the following: [1] pH change, [2] precipitate or particulates, [3] cloudy appearance [4] color change. The nature of supplements added may affect storage conditions and shelf life of the medium. Product label bears expiration date.

Procedure

Materials Required but Not Provided:
Water for tissue culture [W3500]
Sodium Bicarbonate [S5761] or
Sodium Bicarbonate Solution, 7.5% [S8761]
1N Hydrochloric Acid [H9892]
1N Sodium Hydroxide [S2770]
Medium additives as required

Reference

1. Hanks, J. (1976) Hanks' Balanced Salt Solution and pH Control. Tissue Culture Association Manual. 3, 3.

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