

Mitsubishi and Maramorosch Insect Medium

Without Sodium bicarbonate

Product Code: IM002

Product Description :

Mitsubishi and Maramorosch Insect Medium is specially used for the growth and propagation of mosquito cell lines especially *Aedes aegypticus*. It was originally developed to grow cells derived from Leafhopper. Subsequently, it has been used to culture cells derived from a number of insect species.

IM002 is Mitsubishi and Maramorosch Insect Medium. It needs to be supplemented with 5-20 % fetal bovine serum. Lactalbumin hydrolysate serves as a source of free amino acid, whereas yeast extract serves as a source of vitamins. When supplemented with fetal bovine serum, this medium is most commonly used to culture cells derived from a number of mosquitoes. Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines.

Composition :

| Ingredients | mg/L |
|------------------------------|----------|
| INORGANIC SALTS | |
| Calcium chloride dihydrate | 190.000 |
| Magnesium chloride anhydrous | 46.900 |
| Potassium chloride | 200.000 |
| Sodium chloride | 7000.000 |
| Sodium phosphate monobasic | 173.900 |
| OTHERS | |
| D(+) Glucose | 4000.000 |
| Lactalbumin hydrolysate | 6500.000 |
| Yeast extract | 5000.000 |

Directions :

1. Suspend 23.1gms in 900ml tissue culture grade water with constant, gentle stirring until the medium is completely dissolved. Do not heat the water.
2. Add 0.12gms of sodium bicarbonate (TC230) or 1.6ml of 7.5% of sodium bicarbonate solution (TCL013) for each litre of the medium. Stir until dissolved.

3. Adjust the pH to 0.1- to 0.3 units below the desired range using 1N HCl and 1N NaOH, as pH tends to rise during filtration using 2N KOH. Make up the final volume to 1000ml.
4. Sterilize the medium using a membrane filter with porosity of 0.22 microns or less.
5. Aseptically add sterile supplements as required and dispense the desired amount of sterile medium into sterile containers.
6. Store liquid medium at 2-8°C and in dark till use.

Material required but not provided :

Tissue culture grade water (TCL010)
Sodium bicarbonate (TC230)
Sodium bicarbonate solution, 7.5% (TCL013)
1N Hydrochloric acid (TCL003)
1N Sodium hydroxide (TCL002)
Fetal bovine serum (RM1112/ RM10432)

Quality Control:

Appearance

Off-white to creamish white, homogenous powder

Solubility

Clear solution at 23.1gms/L.

pH without Sodium Bicarbonate

6.20 -6.80

pH with Sodium Bicarbonate

6.30 -6.90

Osmolality without Sodium Bicarbonate

300.00 -340.00

Osmolality with Sodium Bicarbonate

310.00 -350.00

Cultural Response

The growth promotion capacity of the medium is assessed qualitatively by analyzing the cells for the morphology and quantitatively by estimating the cell counts and comparing it with a control medium through minimum three subcultures.

Endotoxin Content

NMT 10EU/ml

Storage and Shelf Life:

1. All the powdered media and prepared liquid culture media should be stored at 2-8°C. Use before the expiry date. In spite of above recommended storage condition, certain powdered medium 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. pH and sodium bicarbonate concentration of the prepared medium are critical factors affecting cell growth. This is also influenced by amount of medium and volume of culture vessel used (surface to volume ratio). For example, in large bottles, such as Roux bottles pH tends to rise perceptibly as significant volume of carbon dioxide is released. Therefore, optimal conditions of pH, sodium bicarbonate concentration, surface to volume ratio must be determined for each cell type. We recommend stringent monitoring of pH. If needed, pH can be adjusted by using sterile 1N HCl or 1N NaOH or by bubbling in carbon dioxide.
3. If required, supplements can be added to the medium prior to or after filter sterilization observing sterility precautions. Shelf life of the medium will depend on the nature of supplement added to the medium.

Revision : 1 / 2013



Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.