Mitsuhashi and Maramorosch Insect Medium

Without Sodium bicarbonate

Product Code: IM002

Product Description :

Mitsuhashi and Maramorosch Insect Medium is specially used for the growth and propogation 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 Mitsuhashi amd 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. Inspite 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

CE

1 Identification of the substances/ mixture and of the company/ undertaking

1.1 Product Identifiers

Product Number	IM002
Product Name	**Mitsuhashi and Maramorosch Insect Medium** w/o Sodium bicarbonate

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant identified uses Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Produced by	HiMedia Laboratories Private Limited		
Address	23, Vadhani Industrial Estate, LBS Marg, Ghatkopar (W), Mumbai - 400 086 India		
Tel. No.	+91-22-2500 0970, +91-22-2500 1607	Fax No.	: +91-22-25002468
Mail Id	info@himedialabs.com	Website	: www.himedialabs.com

1.4 Emergency Tel. No.

Emergency Tel. No. Please contact the regional HiMedia representation in your country

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2 Hazards Identification

2.1 Classification of the substance or mixture

CLP Classification-Regulation (EC) No. 1272/2008[EU-GHS/CLP]

Not a hazardous substance or mixture
according to Regulation (EC) No.1272/2008

2.2 Label elements

Labeling according to Regulation (EC) No.1272/2008

The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3 Other Hazards

None

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3 Composition/Information On Ingredients

No components need to be disclosed according to the applicable regulations.

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4 First Aid Measures

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. If skin irritation occurs,get medical advice/attention.

In case of eye contact
Rinse out with plenty of water with the eyelid held wide open. If eye irritation persists, get medical advice/attention.
If swallowed
Rinse mouth with water. Consult a physician if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3 Indication of immediate medical attention and special treatment needed
No data available

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5 Fire Fighting Measures

5.1 Extinguishing media
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media

5.2 Special hazards arising from the substance or mixture
Sulphur oxides, Sodium oxides, Potassium oxides, Oxides of phosphorus, Nitrogen oxides (NOx), Magnesium oxide, Carbon oxides, Calcium oxide

5.3 Precautions for fire-fighters
No data available.

5.4 Further information
Wear self-contained breathing apparatus for firefighting if necessary.

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6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personnel protective equipment. Wear disposable gloves, dust mask and eye protection. Avoid dust formation. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see Section 13.

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7 Handling and Storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended Storage Temperature : On receipt store between 2-8°C

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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8 Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance to general industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the products.

Personal protective equipment

Hygiene measure

Avoid contact with skin,eyes and clothing. Immediately change contaminated clothing.

Eye/face protection

Safety glasses with side-shields conforming to EN 166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection

Impervious clothing The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environment exposure controls

Do not let product enter drains.

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9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Off-white to Creamish white, homogenous powder
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Upper/lower flammability or explosive limits	No data available
Evaporation rate	No data available
Flammability (Solid, gas)	No data available

Vapour pressure	No data available
Relative density	No data available
Water Solubility	Soluble in water
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Vapour density	No data available
Thermal decomposition	No data available

9.2 Other safety information

No data available

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10 Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

None under normal use conditions. Other decomposition products. No data available. In event of fire - refer section 5

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11 Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity- single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

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12 Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 PBT and vPvB assessment

PBT and vPVB assessment not available Chemical safety assessment is not required

12.6 Other adverse effects

No data available

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13 Disposal Considerations

13.1 Waste treatments methods

Product

Offer surplus and non-recyclable solutions to a licenced disposal company. Dispose off waste in accordance with all applicable Federal, state and local laws.

13.2 Contaminated packaging

Dispose in accordance with all applicable federal, state, and local environmental regulations.

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14 Transport Information

14.1 UN-No

ADNR : ADR : IATA_C : IATA_P : IMDG : RID :

14.2 UN proper shipping name

ADNR : Not dangerous goods
ADR : Not dangerous goods
IATA_C : Not dangerous goods
IATA_P : Not dangerous goods
IMDG : Not dangerous goods
RID : Not dangerous goods

14.3 Transport hazard class(es)

ADNR : - ADR : - IATA_C : - IATA_P : - IMDG : - RID : -

14.4 Packaging group

ADNR : - ADR : - IATA_C : - IATA_P : - IMDG : - RID : -

14.5 Environmental hazards

ADR : NO IMDG : Marine Pollutant : NO IATA_C : NO

14.6 Special precautions for use

No data available

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15 Regulatory Information

This safety datasheet complies with the requirements of Regulation(EC) No. 1907/2006.

15.1 Safety health and environment regulations/legislation specific for the substance or mixture

No data available

15.2 Chemical Safety Assessment

No data available

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16 Other information

Further Information

The information given in this safety data sheet is believed to be correct yet does not claim to be all inclusive. This document is intended only as a guide for appropriate precautionary handling of the material by properly trained individuals, information here being commensurate with the present state of our knowledge regarding the manner and conditions of use, handling, storage or disposal. The information provided herein shall not be considered as guarantee of the properties of the product. HiMedia Laboratories, shall not be held liable for any damage resulting from improper handling or contact with the above product. Unless explicitly stated on the product or in any of the documentation accompanying the product, it is intended for research or testing purpose only and is not to be used for any other purpose.
