



## Grace's Insect Medium

**With Sodium bicarbonate  
Without L-Glutamine**

**Product Code: IML001**

### Product Description:

Grace's Insect medium is a modification of the original formula developed by Wyatt. Grace (1962) improved the medium by introducing ten water soluble vitamins in Wyatt's formula. Grace successfully established four strains of cells from ovarian tissue of Australian emperor gum moth using this medium. These were the first continuous cell lines developed from insect tissue.

IML001, Grace's Insect Medium can be used to culture cells derived from a variety of insects especially Lepidopterans and some species of Dipterans. It does not contain L-Glutamine. Originally the basal medium was supplemented with plasma from insects, the tissues of which were cultured or plasma from silkworm, *Bombyx mori*. Presently, the medium needs to be supplemented with 5-20% fetal bovine serum. 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
<b>INORGANIC SALTS</b>	
Calcium chloride dihydrate	1320.000
Magnesium chloride anhydrous	1068.200
Magnesium sulphate anhydrous	1356.650
Potassium chloride	2240.000
Sodium bicarbonate	350.000
Sodium phosphate monobasic monohydrate	1007.000
<b>AMINO ACIDS</b>	
DL-Serine	1100.000
Glycine	650.000
L-Alanine	225.000
L-Arginine hydrochloride	700.000
L-Asparagine monohydrate	400.000
L-Aspartic acid	350.000
L-Cystine dihydrochloride	25.000
L-Glutamic acid	600.000

L-Histidine hydrochloride monohydrate	3376.000
L-Isoleucine	50.000
L-Leucine	75.000
L-Lysine hydrochloride	625.000
L-Methionine	50.000
L-Phenylalanine	150.000
L-Proline	350.000
L-Threonine	175.000
L-Tryptophan	100.000
L-Tyrosine disodium salt dihydrate	72.000
L-Valine	100.000
β-Alanine	200.000
<b>VITAMINS</b>	
Choline chloride	0.200
D-Biotin	0.010
D-Pantothenic acid (hemicalcium)	0.020
Folic acid	0.020
Niacin	0.020
Pyridoxine hydrochloride	0.020
Riboflavin	0.020
Thiamine hydrochloride	0.020
myo-Inositol	0.020
p-Amino benzoic acid (PABA)	0.020
<b>OTHERS</b>	
Alpha-Ketoglutaric acid	370.000
D(+) Glucose	700.000
D-Fructose	400.000
Fumaric acid free acid	55.000
L-Malic acid free acid	670.000
Succinic acid	60.000
Sucrose	26680.000

### Directions:

1. Add 20.55ml of 200mM L-glutamine (TCL012) for 1 litre of medium.

**Material required but not provided:**

L-Glutamine solution 200mM (TCL012)  
Fetal Bovine Serum (RM1112/ RM10432)

**Quality Control:****Appearance**

Yellow to pale yellow colored clear solution.

**pH**

6.10 - 6.30

**Osmolality in mOsm/Kg H<sub>2</sub>O**

350.00 - 390.00

**Sterility**

No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

**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 5EU/ml

**Storage and Shelf Life:**

Store at 2-8°C away from bright light.

Shelf life is 18 months.

Use before expiry date given on the product label.

**Disclaimer :**

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