Sheilds and Sang M3 Insect Medium
With Potassium bicarbonate
Without L-Glutamine
1X Liquid Insect Cell Culture Medium

Product Code: IML004

Product Description:
Sheilds and Sang M3 Insect medium is based on the original formula of D22 medium. The medium supports the growth of the cells derived from *Drosophila melanogaster*. Sheilds and Sang (1977) eliminated chloride salts present in the previous formulation and introduced potassium and sodium ions in the form of glutamate salts. They replaced lactalbumin hydrolysate with individual amino acids and retained yeast extract. The formulation also includes Bis-Tris, an inorganic buffer which prevents shifts in pH.

IML004 is Sheilds and Sang M3 Medium and contains potassium bicarbonate. It does not contain L-glutamine. It needs to be supplemented with 10% fetal bovine serum. Although many variations of Shields and Sang medium have been published, classical Sheilds and Sang M3 (1977) medium is widely used for growth and maintenance of various *Drosophila* cell lines. 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 | 1006.840
Magnesium sulphate anhydrous | 2148.770
Potassium bicarbonate | 500.000
Sodium phosphate monobasic | 880.000
**AMINO ACIDS**
Glycine | 500.000
L-Alanine | 1500.000
L-Arginine hydrochloride | 603.030
L-Asparagine monohydrate | 340.710
L-Aspartic acid | 300.000
L-Cysteine hydrochloride | 200.000
L-Glutamic acid potassium salt | 7880.000
L-Glutamic acid sodium salt | 6530.000
L-Histidine hydrochloride | 681.200
L-Isoleucine | 250.000
L-Leucine | 400.000
L-Lysine hydrochloride | 850.000
L-Methionine | 250.000
L-Phenylalanine | 250.000
L-Serine | 350.000
L-Threonine | 500.000
L-Tryptophan | 100.000
L-Tyrosine disodium salt | 310.380
L-Valine | 400.000
Proline | 400.000
ß - Alanine | 250.000
**VITAMINS**
Choline chloride | 50.000
**OTHERS**
Bis-Tris | 1050.000
D(+) Glucose | 10000.000
Oxalacetic acid | 250.000
Yeast extract | 1000.000

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
6.40 - 7.00

Osmolality in mOsm/Kg H2O
340.00 - 380.00

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

Please refer disclaimer overleaf
**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.