Drosophila Medium

M224

Intended Use:

Recommended for cultivation of Drosophila.

Composition**

Ingredients	Gms / Litre
Brewers yeast, dried	13.300
Corn Meal	133.000
V-8 vegetable juice	180.000
Methyl parahydroxybenzoate	0.093
Agar	13.300
Final pH (at 25°C)	6.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 33.96 grams in 100 ml purified/distilled water. Heat to boiling with constant stirring for several minutes. Dispense the medium into containers as desired to obtain required depth.

Principle And Interpretation

Drosophila medium is prepared according to the formulation by Demerec for cultivation of Drosophila (1). *Drosophila melanogaster* is one of the best-researched insect in the world. It is extensively used by biologist for experimenting and researching heredity and genetics as its genome consists of only four pairs of chromosomes and the flys life cycle is completed in eight to ten days only.

Dried Brewers yeast supplies vitamin and amino acid mixture for the growth of Drosophila. V-8 vegetable juice serves as a source of essential nutrients such as magnesium and potassium ions. Corn meal provides fructose as main carbohydrate source for cell proliferation. Low pH of the media will help to suppress bacterial growth and methyl parahydroxybenzoate serves as inhibitor for bacterial and fungal contaminants.

Type of specimen

Drosophila

Specimen Collection and Handling

For the culture of Drosophila, molten medium is poured into bottles or flasks to a depth of about 2 inches. After the medium is poured into bottles, strips of filter paper cut to the length of bottle are inserted to provide a place for the flies to pupate. The surface of the medium is then inoculated with heavy suspension of live yeast to induce the adult flies to lay eggs. A male and female fly possessing the desired genetic characters are then added to the bottles for mating. The cultures are incubated for about 12 days during which the flies begin to emerge. After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

N.A.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder
Gelling
Firm,comparable with 1.33% Agar gel.
Colour and Clarity of prepared medium
Yellowish brown coloured, opaque gel
Reaction
Reaction of 33.96 % w/v aqueous solution at 25°C. pH : 6.0±0.2
pH
5.80-6.20

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and use freshly prepared plates. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. Dermerec, 1950, Biology of Drosophila, New York: John Wiley and Sons, Inc.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 02/2021