Technical Information

M-Brilliant Green MiVeg Broth

Product Code : VM2102

Application:- M-Brilliant Green MiVeg Broth is a selective and differential medium used for primary screening of *Salmonella* in polluted water using membrane filter technique.

Composition

Ingredients	Gms / Litre
MiVeg peptone No. 3	20.0
Yeast extract	6.0
Lactose	20.0
Saccharose	20.0
Sodium chloride	10.0
Phenol red	0.16
Brilliant green	0.025
Final pH (at 25°C)	6.9±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

M-Brilliant Green MiVeg Broth is prepared by using MiVeg peptone No.3 instead of Proteose peptone thereby making the medium free from BSE/TSE risks. Geldreich and Jeter (1) developed membrane screening technique. Kabler and Clark (2) applied M-Brilliant Green Broth for primary screening of *Salmonella* in polluted water. This selective differential medium is a modification of Brilliant Green Agar without agar in double strength (3) which serves the same purpose.

In this technique, suitable and known quantity of water is passed through membrane filter and this filter is then kept on a absorbent pad saturated with M-Tetrathionate MiVeg Broth Base (VM2115) followed by incubation in humid atmosphere at 35-37°C for 3 hours and then the membrane is transferred to another absorbent pad saturated with M-Brilliant Green MiVeg Broth and the incubation is further continued at 35°C for 15 hours. After the total 18 hours of incubation, the membrane is transfered to a fresh pad soaked in urease test reagent (20 grams urea, 0.16 grams bromo thymol blue, 0.2 grms phenol red, allcomponents in a litre of distilled water). Urease test reaction is recorded after 20 minutes.

This medium contains MiVeg peptone No. 3 which supplies nitrogenous source. Yeast extract serve as the vitamin source. Lactose and Saccharose are the carbohydrates which is useful for growth of the bacteria. Sodium chloride maintains the osmotic balance of medium where as phenol red act as the pH indicator. Brilliant green serves as the selective agent.

Methodology

Suspend 76.19 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 35°C and saturate sterile absorbent cotton pad with 2 ml of the broth.

Note :- The medium should be used within 24 hours of rehydration.

Quality Control

Physical Appearance

Pink coloured, homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Greenish brown coloured, slightly opalescent solution.

Reaction

Reaction of 7.61 % w/v aqueous solution pH: 6.9 ±0.2 at 25°C

pH range

6.7-7.1

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours in humid atmosphere.

Organisms (ATCC)	Inoculum (CFU)	Growth	Colour of the colony*
Escherichia coli (25922)	10-100	poor-good	yellowish green
Salmonella serotype Enteritidis (13076)	10-100	luxuriant	pink to red
Salmonella serotype Typhi (6539)	10-100	poor-good	pink to red
Salmonella serotype Typhimurium (14028)	10-100	luxuriant	pink to red
Staphylococcus aureus (25923)	10-100	inhibited	-

Key : * = on membrane filter

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Geldreich E. E. and Jeter M. L., 1952, Bact. Proc. SAB, Boston, P. 33.
2. Kabler P. W. and Clark H. F., 1952, American J. Publ. Hlth., 42:390.
3. Kauffmann F., 1935, Z. Hyg. Infektionskr., 117:26.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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