Technical Information

Inositol Brilliant Green MiVeg Agar
(Plesiomonas Differential MiVeg Agar)

Product Code : VM1574

Application:- Inositol Brilliant Green MiVeg Agar (Plesiomonas Differential MiVeg Agar) is recommended for selective isolation of *Plesiomonas shigelloides* and *Aeromosssnas* species from faeces and food stuffs.

Composition

Ingredients	Gms / Litre
MiVeg peptone No. 3	15.0
MiVeg extract No. 1	6.5
Meso Inositol	10.0
Synthetic detergent No. I	2.0
Sodium chloride	5.0
Brilliant green	0.00033
Neutral red	0.025
Agar	13.5
Final pH (at 25°C)	7.2 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Inositol Brilliant Green MiVeg Agar is prepared by adding MiVeg peptone No.3 and MiVeg extract No.1 in place of animal based peptones thus making the medium free from BSE/TSE risks. Inositol Brilliant Green MiVeg Agar is the modification of animal based, Inositol Brilliant Green Bile Agar which isdescribed by Schubert (3) and recommended for selective isolation of *Plesiomonas shigelloides* and *Aeromonas* species from faeces and other food stuffs (1). Several media and methods have been designed to selectively isolate *Plesiomonas shigelloides* (an opportunistic pathogen). Although *Plesiomonas shigelloides* is moderately resistant to ampicillin, the ampicillin containing selective media designed for isolation of *Aeromonas* are too inhibitory and have not proved useful in isolation. Inositol Brilliant Green MiVeg Agar, selectively differentiates between *Aeromonas, Plesiomonas* and *Enterobacteriaceae*.
It contains MiVeg peptone No.3 and MiVeg extract No.1 in the medium supplies the essential nitrogenous nutrients for the growth of organisms. *Plesiomonas shigelloides* grows in presence of 0.005% brilliant green but 0. 1 % is reported to be inhibitory (2, 3). They are also resistant to bile salts, which is usually incorporated in media to inhibit gram-positive bacteria. Synthetic detergent No.I (at 0.2% concentration) is functionally equal to bile salts and brilliant green is used in this media which inhibits all gram-positive bacteria and most of the gram-negative bacilli, other than coliforms respectively. Most bacterial species do not ferment meso-inositol, including *Aeromonas* but almost all strains of *Plesiomonas shigelloides* ferment this to naturally occurring cyclic polyhydroxyl alcohol (4). Therefore, this medium serves as a differential medium for inositol utilizers and non-utilizers. Meso-inositol is a fermentable carbohydrate source and neutral red is the pH indicator of the medium. On fermentation of inositol, due to drop of pH the colonies of inositol utilizers appear pink in colour.

Note: Oxidase test should be carried out to differentiate between *Plesiomonas* and *Enterobacteriaceae* (5, 6).

Methodology

Suspend 52 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Pinkish yellow coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.35% Agar gel.

Colour and Clarity of prepared medium

Reddish orange coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 5.2% w/v aqueous solution is pH 7.2 ± 0.2 at 25°C.

pH Range

7.0-7.4

Cultural Response/Characteristics

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

Organisms (ATCC)	Growth	Colour of colony	Oxidase
Aeromonas hydrophila (7966)	luxuriant	Colourless	+
Klebsiella pneumoniae (13883)	good	pink	–
Plesiomonas shigelloides (14029)	luxuriant	pink	+
Staphylococcus aureus (25923)	inhibited	–	–

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 day.

Further Reading

1. Appelbaum D.C., Bowen A.J., Adhikari M., et al, 1978, J. Pediatr., 92:676.
2. Millership, S.E and Chattopadhyay, 1984. J.Hyg.Camb. 92:145.
3. Schubert,R.H.W 1977. Rodwwalt Archiv, 4:97
4. Murray PR, Baron, Pfaller, and Yolken (Eds.), 2003, In Manual of Clinical Microbiology, 8th ed., ASM, Washington D.C.
5. Bhat P., Shanthakumari S. and Rajan D., 1974, Ind. J. Med. Res.,62:1051.
6. MacFaddin J.F., 2000(ed), Biochemical Tests for Identification of Medical Bacteria, 3rd edition, Lippinicott Williams and Wilkins, New York.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for in fingement of any patents.Do not use the products if it fails to meet specificatons for identity and performens parameters.