Technical Information

Brilliant Green MiVeg Agar Base, Modified with 1.2% Agar

Product Code :VM1016A

Application:- Brilliant Green MiVeg Agar Base with 1.2% Agar is recommended for selective isolation of *Salmonellae* other than *Salmonella* serotype Typhi from faeces and other materials. It is also used for examination of foods and dairy products.

Composition

Ingredients	Gms / Litre
MiVeg peptone No. 3	10.00
Yeast extract	3.00
Lactose	10.00
Sucrose	10.00
Sodium chloride	5.00
Phenol red	0.08
Brilliant green	0.0125
Agar	12.00
Final pH (at 25°C)	6.9 ±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Brilliant Green MiVeg Agar Base, Modified with 1.2% Agar is prepared using Veg peptone No.3 (vegetable origin) inplace of Proteose peptone (animal origin) which is free from BSE/TSE risks. This medium is the modifications of Brilliant Green Agar with 1.2% Agar which are used as a primary plating medium for isolation of *Salmonella* species and was first described by Kristensen et al (1) and further modified by Kauffmann (2). Brilliant green present in the media inhibits growth of majority of gram-negative and gram-positive bacteria. *Salmonella* serotype Typhi, *Shigella* species *Escherichia coli, Proteus* species, *Pseudomonas* species, *Staphylococcus aureus* are mostly inhibited. Clinical specimens can be directly plated on this medium.

It is recommended that these media should be used alongwith a less inhibitory medium to increase the chances of recovery as it is highly selective. Often cultures enriched in Selenite or Tetrathionate MiVeg Broth are plated on Brilliant Green MiVeg Agar along with Bismuth Sulphite MiVeg Agar, SS MiVeg Agar, MacConkey MiVeg Agar. Phenol red act as an acid base indicator giving yellow colour to lactose and or sucrose fermenting bacteria. Non- lactose fermenting bacteria develop white to pinkish red colonies within 18 -24 hours of incubation. *Salmonella* serotype Typhi and *Shigella* species may not grow on these media, moreover *Proteus, Pseudomonas* and *Citrobacter* species may mimic enteric pathogens byproducing small red colonies.

Methodology

Suspend 50 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. AVOID OVERHEATING. For more selectivity, aseptically add rehydrated Sulpha Supplement (MS2068). Mix well before pouring into sterile petriplates.

Quality Control

Physical Appearance

Pink coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Greenish brown coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 5.0 % 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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of colony
Escherichia coli (25922)	$2x10^2$-10^4	none to poor	<10%	yellowish green
Salmonella serotype Enteritidis (13076)	10^2-10^3	luxuriant	<50%	pinkish white
Salmonella serotype Typhi (6539)	10^2-10^3	poor to good	<30%	reddish pink
Salmonella serotype Typhimurium (14028)	10^2-10^3	luxuriant	<50%	pinkish white
S. aureus (25923)	$2x10^2$-10^4	inhibited	0%	-

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. Kristensen M., Lester V, and Jurgens A., 1925, Brit. J. Exp. Pathol., 6:291.
2. Kauffman F., 1935, Seit F. Hyg. 177:26.

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
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