Technical Information

Bacteroides MiVeg Agar Base (BBE)

Product Code :VM1805

Application:- Bacteroides Bile Esculin MiVeg Agar Base is used for selective isolation,identification and cultivation of *Bacteroides fragilis* group.

Composition

Ingredients	Gms / Litre
MIVeg hydrolysate	25.0
Papaic digest of soyabean meal	10.0
Sodium chloride	5.0
Synthetic detergent No. II	5.0
Esculin	1.0
Ferric ammonium citrate	0.5
Ferric pyrophosphate	0.01
Vitamin K_1	0.01
Agar	15.0
Final pH (at 25°C)	7.0±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Bacteroides MiVeg Agar Base is prepared by vegetable peptones instead of animal based peptones to make the medium free from BSE/TSE risks. This medium is the modification of the medium which was formulated by Livingston, Kominos and Yee (1) as a primary isolation medium for the selective and presumptive identification of *Bacteroides fragilis* group (2). Rapid detection and identification of *Bacteroides fragilis* is important because they have been found to be more resistant to antimicrobial therapy than other anaerobes.

MiVeg hydrolysate, papaic digest of soyabean meal and ferric pyrophosphate are highly nutritious which supports the growth of fastidious anaerobic bacteria like *Bacteroides species* in this medium. Synthetic detergent No. II inhibits almost all anaerobic gram-negative bacilli except*Bacteroides fragilis*. Gentamicin inhibits most organisms other than esculin positive *Bacteroides*. The minimum inhibitory concentration of 80 ug/ml or greater is required for *Bacteroides fragilis* group organisms (3). Differentiation of the *B. fragilis* group is based on esculin hydrolysis which results in esculetin and dextrose formation. Esculin reacts with the iron salt i.e. Ferric ammonium citrate and forms dark brown to black complex.

Methodology

Suspend 61.52 grams of powder media in 1000 ml purified/distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add rehydrated contents of 2 vials of Bacteroides Selective Supplement (MS2062). Mix well before pouring into sterile petriplates.

Quality Control

Physical Appearance

Light yellow coloured nay have slightly greenish tinge, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Medium amber coloured, clear to slightly opalescent gel with a bluish tinge is formed in petri plates.

Reaction

Reaction of 6.15 % w/v aqueous solution pH: 7.0±0.2 at 25°C

pH range

6.8-7.2

Cultural Response/Characteristics

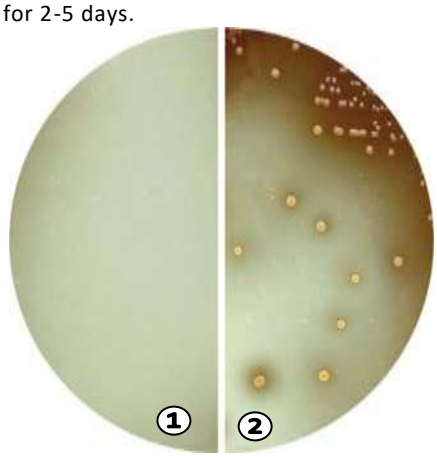
Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Esculin hydrolysis
Bacteroides fragilis (25285)	10^2-10^3	good-luxuriant	>50%	+
Bacteroides vulgatus (8482)	10^2-10^3	good-luxuriant	>50%	-
Clostridium perfringens (13124)	10^2-10^3	Inhibited	0%	-
Proteus mirabilis (12453)	10^2-10^3	None-poor	>10%	-

Key : + = blackening of medium
- = no change

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.



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1. Control
2. *Bacteroides fragilis*

Further Reading

1. Livingston, Kominos and Yee, 1978, J. Clin. Microbiol., 7:448.
2. Murray PR, Baron, Pfaller and Yolken 2003, In Manual of Clinical Microbiology, 8th ed., (Eds.), ASM, Washington, D.C.
3. Finegold S.M. and Sutler V.L., 1971, J. Infect. Dis., 124:556

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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