

Technical Information

Anaerobic MiVeg Agar Base

Product Code : VM1902

Application:- Anaerobic MiVeg Agar Base supplemented with Egg Yolk Emulsion is recommended for detection of *Clostridium perfringens* in foods.

Composition**

Ingredients	Gms / Litre
MiVeg peptone No.3	20.0
MiVeg hydrolysate	5.0
Yeast extract	5.0
Sodium chloride	5.0
Agar	20.0
Final pH (at 25°C)	7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Anaerobic MiVeg Agar Base is prepared by using MiVeg peptone No.3 and MiVeg hydrolysate instead of Proteose peptone and Casein enzymic hydrolysate respectively thus the medium become BSE/TSE risks free. Anaerobic MiVeg Agar Base is the modification of Anaerobic Agar Base which is recommended by APHA (1) for detecting *Clostridium perfringens* in foods.

MiVeg hydrolysate, yeast extract and MiVeg peptone No.3 supply amino acids and other complex nitrogenous nutrients. Yeast extract provides B-complex vitamins. Egg yolk emulsion is added to the medium due to which proteolytic activity and also the lipase and lecithinase activity can be observed. Lecithinase degrades lecithin of egg yolk, forming an insoluble opaque precipitate (2). Lipase breaks down free fats present in the egg yolk causing an iridescence to form on the colony surface. For the lipase reaction, plates may be kept up to a week for incubation (2). Proteolysis is indicated by clear zones in the medium surrounding the growth (3).

Methodology

Suspend 55 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. Cool to 50°C and add 80 ml Egg Yolk Emulsion (MS2045). Mix well before pouring into sterile plates.

Quality Control

Physical Appearance

Yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium

Basal medium yields clear to slightly opalescent gel. Addition of Egg yolk emulsion results in light yellow coloured, opaque gel.

Reaction

Reaction of 5.5% w/v aqueous solution is 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 18-48 hours when incubated anaerobically

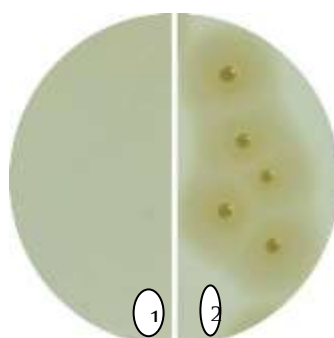
Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Lecithinase	Lipase
<i>Clostridium perfringens</i> (12924)	10 ² -10 ³	Good-luxuriant	>70%	+	-
<i>Clostridium sporogenes</i> (11437)	10 ² -10 ³	Good-luxuriant	>70%	-	+

Key : Lecithinase + => opaque halo around the colony
Lipase + => clear zone around the colony

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° in sealable plastic bags for 2-5 days.



VM1902 Anaerobic MiVeg Agar Base

1.Control

2.*Clostridium perfringens*

Further Reading

1. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
2. Finegold and Baron, 1986, Bailey and Scott's Diagnostic Microbiology, 7th ed., The C.V. Mosby Company, St. Louis.
3. Murray PR, Baron, Pfaller, and Tenover (Eds.), 2003, Manual of Clinical Microbiology, 8th ed., ASM, Washington, D.C.

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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