Anaerobic HiVeg™ Agar Base MV902

Anaerobic HiVeg Agar Base supplemented with Egg Yolk Emulsion is recommended for detection of *Clostridium perfringens* in foods.

Compostion ** :

Ingredients	Grams/Litre
HiVeg peptone No. 3	20.0
HiVeg 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.

Directions :

Suspend 55 grams in 1000 ml distilled water. 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 (FD045). Mix thoroughly before pouring into sterile plates.

Principle and Interpretation :

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

HiVeg hydrolysate, yeast extract and HiVeg 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 irridescent sheen to form on the colony surface. For the lipase reaction, plates may be kept upto a week for incubation (2). Proteolysis is indicated by clear zones in the medium surrounding the growth (3).

Quality Control :

Appearance of powder

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

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity

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

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV902 HiVeg hydrolysate HiVeg peptone No. 3	**M902** Casein enzymic hydrolysate Proteose peptone

Recommended for	:	Detection of *Clostridium perfringens* in foods
Reconstitution	:	55.0 g/l
Quantity on preparation (500g)	:	9.09 L
pH (25°C)	:	7.0 ± 0.2
Supplement	:	Egg Yolk Emulsion (FD045)
Sterilization	:	121°C / 15 minutes.

Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours, when incubated anaerobically.

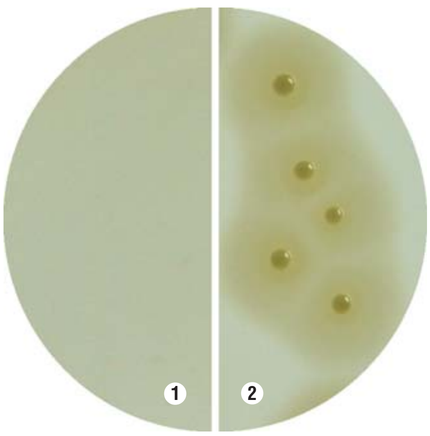
Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Lecithinase	Lipase
Clostridium perfringens (12924)	10^2-10^3	good-luxuriant	>70%	+	-
Clostridium sporogenes (11437)	10^2-10^3	good-luxuriant	>70%	-	+

Key : Lecithinase + => opaque halo around the colony

Lipase + => clear zone around the colony

References :

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 Yolken (Eds.), 2003, In Manual of Clinical Microbiology, 8th ed., ASM, Washington, D.C.



MV902 Anaerobic HiVeg Agar Base

1. Control
2. *Clostridium perfringens*