

Acid HiVeg™ Broth

MV1208

Acid HiVeg Broth is recommended for the cultivation of acid tolerant microorganisms from canned foods.

Composition ** :

Ingredients	Grams/Litre
Invert sugar	10.0
HiVeg peptone	10.0
Yeast extract	7.5

Final pH (at 25°C) 4.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 27.5 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium. Distribute into tubes or flasks. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle and Interpretation :

Acid HiVeg Broth is prepared by completely replacing Peptic digest of animal tissue (animal based peptone) with HiVeg peptone (vegetable peptones), thus making the medium BSE/TSE risk free. Acid HiVeg Broth is the modification of Acid Broth cited in APHA(1) for cultivating acid tolerant microorganisms from canned foods. Bacteria such as *Bacillus coagulans*, *Lactobacillus*, *Leuconostoc* and yeasts etc. are capable of causing spoilage in acid product concentrates such as fruit pastes, tomato paste. Some *Pediococci* and *Streptococci* which are aciduric and responsible for canned food spoilage can also be cultivated in Acid HiVeg Broth. Acid HiVeg Broth is a very good medium for the recovery of minimal contamination of canned acid food.

Approximately 100 grams of the product to be tested is inoculated aseptically into 300 ml of sterile medium in 500 ml screw-cap flasks. The broth is intended primarily as a mass culture medium for detecting minimal contaminants in aseptically packed acid products. Further, minimum of three flasks per sample should be inoculated. Retain extra aseptic sample from each container and incubate it with the flasks. For the microscopic comparisons, retain an additional sample at refrigeration temperature. It can also be used if the test has to be repeated. Examine the samples visually for fermentation or biological surface growth daily which are incubated at 30°C for 5 days. Incubate the extra retained samples for 10 days. Examine all the samples microscopically, at the end of incubation period for evidence of bacterial or yeast contamination. The pH is the most important factor which not only determines the degree of thermal processing of

Product Profile :

Vegetable based (Code MV)☉		Animal based (Code M)	
MV1208	HiVeg peptone	M1208	Peptic digest of animal tissue
Recommended for	:	Cultivation of acid tolerant microorganisms from canned foods.	
Reconstitution	:	27.5 g/l	
Quantity on preparation (500g):	:	18.18 L	
pH (25°C)	:	4.0 ± 0.2	
Supplement	:	None	
Sterilization	:	121°C / 15 minutes.	
Storage	:	Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.	

canned foods but is also an important parameter of this medium for isolating acid tolerant bacteria from canned foods.

Acid HiVeg Broth contains invert sugar which is a mixture of 50% glucose and 50% fructose obtained by the hydrolysis of sucrose. It is included in the medium to prevent the loss of water from the medium and also because acid tolerant bacteria utilize it. HiVeg peptone and yeast extract provide the nitrogenous nutrients including amino acids to the microorganisms.

Quality Control :**Appearance of powder**

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

Colour and Clarity

Light amber coloured, clear solution without any precipitate.

Reaction

Reaction of 2.75% w/v aqueous solution is pH 4.0 ± 0.2 at 25°C

Cultural Response

Cultural characteristics observed after an incubation at 30°C upto 5 days.

Organisms (ATCC)	Inoculum (CFU)	Growth
<i>Bacillus coagulans</i> (8038)	10 ² -10 ³	good - luxuriant
<i>Lactobacillus acidophilus</i> (4356)	10 ² -10 ³	good - luxuriant
<i>Leuconostoc mesenteroides</i> (12291)	10 ² -10 ³	good - luxuriant

References :

- Vanderzant, c., Splittstoesser d f. (Eds.), 1992, Compendium of Methods For The Microbiological Examination of Foods, 3rd ed., APHA, Washington, D.C.