Campylobacter Nitrate HiVeg™ Broth MV1240

Campylobacter HiVeg Nitrate Broth is used for identification of *Campylobacter* species on the basis of nitrate reduction.

Composition ** :

Ingredients	Grams/Litre
HiVeg infusion	10.0
HiVeg hydrolysate No. 1	10.0
Sodium chloride	5.0
Potassium nitrate	2.0

Final pH (at 25°C) 7.0 ± 0.2
** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 27 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle and Interpretation :

This medium is prepared by using HiVeg infusion and HiVeg hydrolysate No.1 in place of Beef heart infusion and Tryptose respectively which are free from BSE/TSE risks. Campylobacter Nitrate HiVeg Broth is the modification of Campylobacter Nitrate Broth formulated as per APHA and is used for identification of *Campylobacter* species on the basis of nitrate reduction (1). *Campylobacter* species has been recognized as enteric pathogens and has been found to be clinically important since they do not ferment or oxidize the usual carbohydrate substrates (1). *Campylobacter jejuni* is oxidase positive and reduces nitrates.
HiVeg infusion and HiVeg hydrolysate No.1 provide the essential nutrients including mainly nitrogenous and few carbon compounds to *Campylobacter* species. Sodium chloride maintains the osmotic balance of the medium. Potassium nitrate serves as the nitrate source. Biochemical reactions by which species may be differentiated are relatively few because of their inability to ferment or oxidize the usual carbohydrate substrates.
Preparation of nitrate Test Reagents and Technique :
1. Sulphanilic acid : Dissolve 8 grams of sulphanilic acid in 1 litre 5 N acetic acid.
2. Alpha-naphthylamine reagent : Dissolve 5 grams of alpha-naphthylamine in 1 litre 5 N acetic acid.
For the test : Put 2 - 3 drops of each reagent into the tube containing culture to be tested. A distinct red or pink colour indicates nitrate reduction. A control (uninoculated) tube should also be tested.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV1240 HiVeg infusion HiVeg hydrolysate No. 1	**M1240** Beef heart, infusion Tryptose

Recommended for	:	Identification of *Campylobacter* species on the basis of nitrate reduction.
Reconstitution	:	27.0 g/l
Quantity on preparation (500g)	:	18.51 L
pH (25°C)	:	7.0 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.

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

Quality Control :

Appearance of powder
Yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.
Colour and Clarity
Amber coloured, clear solution without any precipitate.
Reaction
Reaction of 2.7% w/v aqueous solution is pH 7.0 ± 0.2 at 25°C.
Cultural Response
Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Nitrate reduction
Acinetobacter calcoaceticus (23055)	10^2-10^3	luxuriant	-
Campylobacter jejuni (29428)	10^2-10^3	luxuriant	+
Enterobacter aerogenes (13048)	10^2-10^3	luxuriant	+
Escherichia coli (25922)	10^2-10^3	luxuriant	+
Salmonella serotype Typhimurium (14028)	10^2-10^3	luxuriant	+

Key : + = red or pink colour
- = no red or pink colour

References :

1. Downes FP and Ito K (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.

◉ Prepared from GMO free Vegetable proteins replacing Animal based peptones. Freedom from BSE/TSE worries.