Crystal Violet Tetrazolium HiVeg™ Agar Base MV586

Crystal Violet Tetrazolium HiVeg Agar Base is used for detection of gram negative psychrotrophic bacteria causing food spoilage.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	5.0
Yeast extract	2.5
Dextrose	1.0
Crystal violet	0.001
Agar	15.0

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

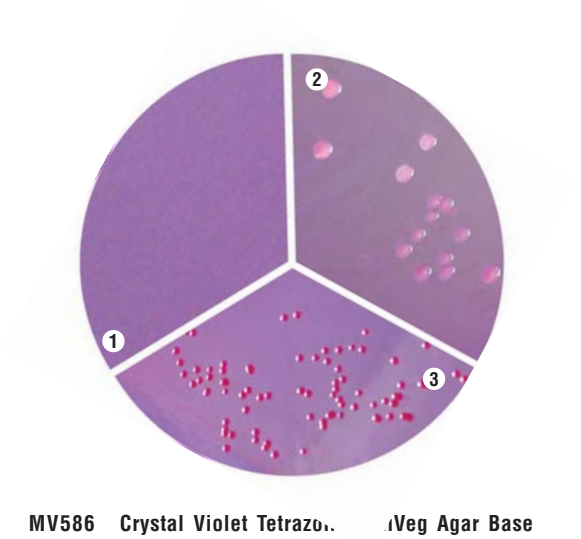
Directions :

Suspend 23.5 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 5 ml of sterile 1% solution of 2,3,5-Triphenyl Tetrazolium Chloride (FD057). Mix well and distribute as desired.

Principle and Interpretation :

Crystal Violet Tetrazolium HiVeg Agar Base is prepared by using HiVeg hydrolysate instead of Casein enzymic hydrolysate making the medium free of BSE/TSE risks. This medium is the modification of Crystal Violet Tetrazolium Agar Base which is based on the original formulation suggested by Olson (1) and recommended by APHA (2) for detecting gram-negative psychrotrophic bacteria causing food spoilage. Species of *Achromobacter, Alcaligens, Flavobacterium* and *Pseudomonas* are included among the psychrotrophic bacteria as they have their growth optima below 20°C (3). Many psychrotrophic microorganisms when present in high density can cause off-flavours and physical spoilage of foods. Their growth rate is highly dependent on temperature, if the temperature is reduced their growth rate is slowed down. Thus the spoilage of refrigerated food is very much dependent on temperature (3, 4).

HiVeg hydrolysate and yeast extract provide various nitrogenous nutrients to the organisms while dextrose serves as the carbon or carbohydrate source. Crystal violet inhibits most of the gram-positive organisms and therefore inclusion of crystal violet in the medium does not affect the growth of psychrotrophic organisms which are mostly gram-negative.



MV586 Crystal Violet Tetrazo.. iVeg Agar Base
1. Control
2. *Pseudomonas aeruginosa*
3. *Listeria monocytogenes*

Product Profile :		
Vegetable based (Code MV)◉		**Animal based** (Code M)
MV586 HiVeg hydrolysate		**M586** Casein enzymic hydrolysate
Recommended for	:	Detection of gram-negative psychrotrophic bacteria causing food spoilage.
Reconstitution	:	23.5 g/l
Quantity on preparation (500g)	:	21.27 L
pH (25°C)	:	7.0 ± 0.2
Supplement	:	TTC Solution (FD057)
Sterilization	:	121°C / 15 minutes.
Storage : Dry Medium - Below 30°C, Prepared Medium - 2-8°C		

Quality Control :

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

Gelling
Firm, comparable with 1.5% Agar gel.

Colour and Clarity
Light purple coloured, clear to slightly opalescent gel forms in petri plates.

Reaction
Reaction of 2.35% w/v aqueous solution is pH 7.0 ± 0.2 at 25°C.

Cultural Response
Cultural characteristics observed after an incubation at 20-30°C for 18 - 48 hours, with added 1% T.T.C. solution (FD057)

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of colony
Listeria monocytogenes (19118)	10^2-10^3	good-luxuriant	>70%	maroon
Pseudomonas aeruginosa (27853)	10^2-10^3	good-luxuriant	>70%	maroon
Staphylococcus aureus (25923)	10^2-10^3	inhibited	0%	-
Yersinia enterocolitica (27729)	10^2-10^3	good-luxuriant	>70%	maroon

References :

1. Olson H.C., 1963, J. Dairy Sci., 46:362.
2. Speck M. (Ed.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd ed., American Public Health Association, Washington, D.C.
3. Tomkin R.B., 1973, Food Technol., 27:54.
4. Elliott R.P. and Michener H.D., 1965, U.S. Dept. Agr. Tech. Bull. No. 1320, p. 110, Washington, D.C.

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

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