Letheen HiVeg™ Agar / Broth MV414 / MV165

Letheen HiVeg Agar / Broth is recommended for determination of bactericidal activity of quaternary ammonium compounds using *Escherichia coli* or *Staphylococcus aureus*.

Composition** :

Ingredients	MV414 Grams/Litre	MV165 Grams/Litre
HiVeg peptone	—	10.00
HiVeg hydrolysate	5.00	—
HiVeg extract	3.00	5.00
Dextrose	1.00	—
Polysorbate 80	7.00	5.00
Sodium chloride	—	5.00
Lecithin	1.00	0.70
Agar	15.00	—

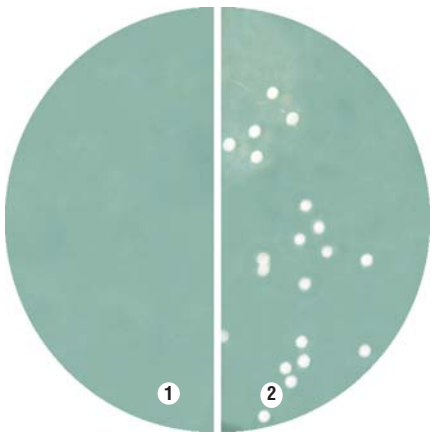
Final pH (at 25°C) 7.0 ± 0.2
** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 32 grams of MV414 or 25.7 grams of MV165 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.

Principle and Interpretation :

These media are prepared by completely replacing animal based peptones with vegetable peptones which are free from BSE/TSE risks. These media are the modification of Tryptone Glucose Extract Agar developed according to APHA (1) for use in the microbiological examination of water which was further modified by Weber and Black (2) with addition of lecithin and polysorbate 80 which resulted in a medium that effectively neutralizes quaternary ammonium compounds in the testing of germicidal activity (3).
HiVeg extract, HiVeg hydrolysate or HiVeg peptone, dextrose supply nitrogenous compounds, carbon, sulphur and other trace elements to the organisms. Lecithin and polysorbate 80 enables the recovery of bacteria from solutions containing residues of disinfectant used in sanitization of utensils and equipments. Lecithin neutralizes quaternary ammonium compounds and polysorbate 80 neutralizes phenolic disinfectants, hexachlorophene and formalin (4, 5). Dehydrated medium may appear moist with 'brown sugar' appearance, does not indicate deterioration.



MV414 Letheen HiVeg Agar
(Against dark background)
1. Control
2. *Staphylococcus aureus*

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV414/MV165 HiVeg peptone HiVeg extract HiVeg hydrolysate	**M414/M165** Peptic digest of animal tissue Beef extract Casein enzymic hydrolysate

Recommended for	:	Determination of bactericidal activity of quaternary ammonium compounds using *Escherichia coli* or *Staphylococcus aureus*.
Reconstitution	:	(MV414) : 32.0 g/l
	:	(MV165) : 25.7 g/l
Quantity on preparation (500g)	:	(MV414) : 15.62 L
	:	(MV165) : 19.45 L
pH (25°C)	:	7.0 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.
Storage : Dry Medium and Prepared Medium 2 - 8°C.		

Quality Control :

Appearance of Powder
Dark yellow coloured may have slight lumps.
Gelling
Firm, comparable with 1.5% Agar gel of MV414.
Colour and Clarity
Light yellow coloured, clear to slightly opalescent gel forms in petri plates, clear solution in tubes.
Reaction
Reaction of 3.2% w/v of MV414 or 2.57% w/v of MV165 aqueous solution is pH 7.0 ± 0.2 at 25°C.
Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 24 - 48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Escherichia coli (25922)	10^2–10^3	good to luxuriant	>70%
Staphylococcus aureus (6538)	10^2–10^3	good to luxuriant	>70%

References :

1. Eaton A.D., Clesceri L.S. and Greenberg A.E., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st ed, APHA, Washington, D.C.
2. Weber and Black, 1948, Soap Sanitary Chem., 24:134.
3. Weber and Black, 1948, Am. J. Public Health, 38:1405.
4. Bacteriological Analytical Manual, 8th ed; Revision A, 1998, AOAC, Washington, D.C.
5. MacFaddin J.F., 2000 (ed), Biochemical Tests for Identification of Medical Bacteria, 3rd edition, Lippincott Williams and Wilkins, New York

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

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