Listeria Enrichment HiVeg™ Broth / Listeria Selective HiVeg™ Agar (Twin Pack)

MV569 / MV567

Listeria Enrichment HiVeg Broth / Listeria Selective HiVeg Agar is used for cultivation and selective isolation of *Listeria* species from clinical specimens.

Composition** :

Ingredients	MV569 Grams/Litre	MV567 Grams/Litre
Part A : HiVeg hydrolysate	10.00	10.00
HiVeg peptone	10.00	10.00
Dextrose	1.00	1.00
Sodium chloride	5.00	5.00
Thiaminium dichloride	0.005	0.005
Acriflavin hydrochloride (Trypaflavin)	0.01	0.01
Nalidixic acid	—	0.04
Agar	—	13.00
Part B : Potassium thiocyanate	37.50	37.50

Final pH (at 25°C) 7.4 ± 0.2
** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 26 grams of Part A (MV569) or 39 grams of Part A (MV567) and 37.5 grams of Part B 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 makes the media free of BSE/TSE risks. These media are modifications of Listeria Selective Agar and Listeria Enrichment Broth which was proposed by Feindt (1) for the cultivation and isolation of *Listeria* species from clinical and non-clinical specimens. Obiger and Schonberg (2) reported the superiority of these media to yield *Listeria* from mix-infected specimens.

Thiocyanate and Nalidixic acid inhibits gram-negative bacteria (3, 4). Bockemühl (5) reported suppression of *Enterococci* by combination of selective agents and acridine dyes. The combination of Acriflavin hydrochloride and Nalidixic acid was recommended by Ralovich et al (6) and Kampelmacher and Van Noorle Jansen (7) for the isolation of *Listeria*. Listeria Enrichment HiVeg Broth can be further improved by adding Colimycin alongwith Nalidixic acid (8). The mix infected specimen is added directly to Listeria Enrichment HiVeg Broth or subjected to cold enrichment (9) in Tryptose HiVeg Broth (MV179) & then cultured on Listeria Selective HiVeg Agar. Haemolytic forms can be identified by inoculating Blood Agar HiVeg (MV073). HiVeg hydrolysate, HiVeg peptone provides essential nutrients. Thiaminium dichloride is the vitamin B source added to improve the growth of *Listeria*.

Quality Control :

Appearance of Powder

Part A : Yellow coloured may have slightly greenish tinge, homogeneous, free flowing powder.
Part B : White coloured, homogeneous, free flowing powder.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV569/MV567 HiVeg peptone HiVeg hydrolysate	**M569/M567** Peptic digest of animal tissue Casein enzymic hydrolysate

Recommended for	:	Cultivation and selective isolation of *Listeria* species from clinical specimens
Reconstitution	:	(MV569) : 26 g/l of Part A + 37.5 g/l of Part B
	:	(MV567) : 39 g/l of Part A + 37.5 g/l of Part B
Quantity on preparation (500g)	:	(MV569) : 7.87 L (A+B)
	:	(MV567) : 6.53 L (A+B)
pH (25°C)	:	7.4 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.
Storage : Dry Medium and Prepared Medium 2 - 8°C.		

Gelling

Firm, comparable with 1.3% Agar gel of MV567.

Colour and Clarity

Yellow coloured, clear to slightly opalescent gel forms in petri plates, clear solution in tubes.

Reaction

Reaction of medium MV567 (3.9% w/v Part A + 3.75% w/v Part B) and MV569 (2.6% w/v Part A + 3.75% w/v Part B) is pH 7.4 ± 0.2 at 25°C.

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 48 hours (If possible in a 10% CO_2 atmosphere).

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery on MV567
Listeria monocytogenes (19112)	$10^2 - 10^3$	luxuriant	>50%
Listeria monocytogenes (19118)	$10^2 - 10^3$	luxuriant	>50%
Enterococcus faecalis (29212)	$2x10^3 - 10^4$	none-poor	< 10%
Escherichia coli (25922)	$2x10^3 - 10^4$	inhibited	0%
Pseudomonas aeruginosa (27853)	$2x10^3 - 10^4$	inhibited	0%

References :

1. Feindt E., 1972, Inuug. Diss., Würzburg.
2. Obiger G. and Schonberg A., 1973, Fleischwirtschaft, 10:1450.
3. Lebnert C., 1964, Arch. Exp. Vet. Med., 18:891 and 1247.
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5. Bockemühl J., Seeliger H.P.R. and Kathke R., 1971, J. Med. Microbiol. Imm. 157:84.
6. Ralorich B., et al, 1971, Zbl. Bakt. I.Orig., 216:88.
7. Kampelmacher E.H. and Van Noorle-Jansen L.M., 1972, Zbl. Bakt. J. Orig., 221:139.
8. Le Guilloux M., 1980, Bull. Soc. Vet. Prat. de France, 64:45.
9. Grey M.L. et al, 1948, J. Bact., 55:471.

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

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