Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Listeria Enrichment MiVeg Broth

Product Code : VM1569

Application:- Listeria Enrichment MiVeg Broth is used for cultivation and selective isolation of *Listeria* species from clinical specimens

Composition

Ingredients	Gms / Litre
Part A	
MiVeg hydrolysate	10.00
MiVeg peptone	10.00
Dextrose	1.00
Sodium chloride	5.00
Thiaminium dichloride	0.005
Acriflavin hydrochloride (Trypaflavin)	0.01
Part B	
Potassium thiocyanate	37.50
Final pH (at 25°C)	7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Listeria Enrichment MiVeg Broth is prepared by adding vegetables peptones in place of animal based peptones thus making the medium free from BSE/TSE risks. This medium is the modification of Listeria Enrichment Broth which was described 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 this medum to yield *Listeria* from mix- infected specimens. Thiocyanate inhibits gram-negative bacteria (3, 4). Bockemühl (5) reported suppression of *Enterococci* by combination of selective agents and acridine dyes. Listeria Enrichment MiVeg Broth can be further improved by adding Colimycin along with Naliidixic acid (8). The mix infected specimen is added directly to Listeria Enrichment MiVeg Broth or subjected to cold enrichment (9) in Tryptose MiVeg Broth (VM1179) & then cultured on Listeria Selective MiVeg Agar. Haemolytic forms can be identified by inoculating Blood Agar MiVeg (VM1073).

MiVeg hydrolysate, MiVeg peptone supplies all the necessary nutrients required for the optimum growth of micro-organisms. Thiaminium dichloride is the vitamin B source added to improve the growth of *Listeria*.

Methodology

Suspend 26 grams of Part A and 37.5 grams of Part B in 1000 ml distilled water. Mix well and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

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

Part B : White coloured, homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Yellow coloured, clear solution in tubes.

Reaction

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

pH Range

7.2 - 7.6

Cultural Response/Characteristics

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
Listeria monocytogenes (19112)	10^2-10^3	luxuriant
Listeria monocytogenes (19118)	10^2-10^3	luxuriant
Enterococcus faecalis (29212)	2×10^3-10^4	none-poor
Escherichia coli (25922)	2×10^3-10^4	inhibited
Pseudomonas aeruginosa (27853)	2×10^3-10^4	inhibited

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 day.

Further Reading

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.
4. Beerens H. and Tahon-Castel M.M., 1966, Ann. Inst. Pasteur, 111:90.
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.

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