

Technical Information

BLE MiVeg Broth Base (Buffered Listeria Enrichment MiVeg Broth Base)

Product Code : VM2578

Application:- BLE MiVeg Broth Base (Buffered Listeria Enrichment MiVeg Broth Base) is recommended for the enrichment procedure for isolation of *Listeria monocytogenes*

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	17.00
Papaic digest of soyabean meal	3.00
Sodium chloride	5.00
Dipotassium hydrogen phosphate	2.50
Dextrose	2.50
Yeast extract	6.00
Monopotassium phosphate (anhydrous)	1.35
Disodium phosphate (anhydrous)	9.6
Sodium pyruvate	1.0
Final pH (at 25°C)	7.3±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

BLE MiVeg Broth Base (Buffered Listeria Enrichment MiVeg Broth Base) is prepared by using MiVeg hydrolysate in place of Casein enzymic hydrolysate to make the medium BSE/TSE risk free. This media is the modification of conventional formula formulated as per APHA (1) for the selective enrichment of *Listeria monocytogenes* from foods. The original broth has been modified by buffering the medium, thereby making it possible for the medium to be used successfully in conjunction with DNA probe and other methods that are more sensitive than conventional cultural procedures.

Ingredients like MiVeg hydrolysate and papaic digest of soyabean meal supplies amino acids and other complex nitrogenous substances. Dextrose is the energy source. Phosphates act as buffering system to maintain pH. Yeast extract is the rich source of vitamin B complex.

According to FDA's enrichment procedure (4) for isolation of *Listeria monocytogenes* from dairy products, the sample to be tested is inoculated in enrichment broth and incubated at 30°C for 4 hours without the selective supplement. After 4 hours the selective supplement is added and further kept for incubation for additional 44 hours at 30°C. At 24hrs and 48hrs the enriched culture is streaked on Oxford Listeria MiVeg Medium Base (VM2145) and LPM MiVeg Agar (VM2228) / Listeria identification MiVeg Agar Base, PALCAM (VM2064) and incubated at 35°C for 24-48 hours. Presumptive *Listeria* colonies are selected and colonies are further purified on Tryptone Soya Yeast Extract MiVeg Agar (VM2214). Purified isolates are then subjected to a variety of biochemical tests to confirm the presence of *L.monocytogenes*.

Methodology

Suspend 48 grams of powder media in 1000 ml purified/distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45°C. Aseptically add the rehydrated contents of 2 vials of Listeria Selective Supplement II (MS2063I). Mix well and dispense as desired.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Yellow coloured, clear solution in tubes.

Reaction

Reaction of 4.8% w/v aqueous solution is pH 7.3 $\pm$ 0.2 at 25°C.

pH range

7.1-7.5

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 30°C for 24-48 hours with added Listeria Selective Supplement II (MS2063I).

Organisms (ATCC)

Listeria monocytogenes (19111)

Listeria innocua (33090)

Escherchia coli (25922)

Growth

good - luxuriant

good - luxuriant

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° in sealable plastic bags for 2-5 days.

Further Reading

1. Vanderzant C. and Splittstoessor D. (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th ed., APHA, Washington D.C.
2. International Organization for Standardization (ISO), 1993, Draft, ISO/DIS 10560.
3. Atlas R. M. 1993, Handbook of Microbiological Media, CRC Press, Inc., Boca Raton.
4. Bacteriological Analytical Manual, 1989, 8th ed. Supplement.

Disclaimer :

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