

Technical Information

Listeria Oxford MiVeg Medium Base

Product Code : VM2145

Application:- Listeria Oxford MiVeg Medium Base with supplements is recommended for the isolation of *Listeria* species from pathological specimen.

Composition

Ingredients	Gms / Litre
MiVeg special peptone	23.0
Lithium chloride	15.0
Sodium chloride	5.0
Corn starch	1.0
Esculin	1.0
Ammonium ferric citrate	0.5
Agar	10.0
Final pH (at 25°C)	7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Listeria Oxford MiVeg Medium Base is prepared by adding Miveg special peptone instead of peptone special which makes the medium free from BSE/TSE risks. This medium is the modification of Listeria Oxford Medium Base which was formulated as described by Curtis et al (1) for isolation of *Listeria monocytogenes* from clinical and food specimens. Lithium chloride and the antibiotics inhibit gram-negative bacteria and most gram-positive organisms but certain strains of *Staphylococci* may grow as esculin negative colonies. *Listeria monocytogenes* hydrolyzes esculin to esculetin and dextrose. Esculetin reacts with ferric citrate and produces black zones around the colonies.

Addition of antimicrobial agent to the base increases the selectivity of the medium by inhibiting gram-negative and gram-positive organisms. Isolation technique to be used vary with material under examination (2). For all specimens selective and cold enrichment is recommended (3, 4). For faecal and biological specimens, the sample is homogenized in 0.1% MiVeg Peptone Water, (VM1028) and 0.1 ml amount is either plated directly on Listeria Selective MiVeg Agar (VM1567) or inoculated into the Listeria Enrichment MiVeg Medium Base and incubated at 30°C for 7 days and then further inoculated on Listeria Selective MiVeg Agar (VM1567). For food and environmental samples selective enrichment is generally used.

Methodology

Suspend 27.75 grams of powder media in 500 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45 - 50°C and aseptically add 1 vial of rehydrated contents of Oxford Listeria Supplement (MS2071) or 1 vial of Listeria Moxalactam Supplement (MS2126). Mix well before pouring into sterile petri plates.

Caution: Lithium chloride is very harmful. Avoid contact with body and vapours inhalation. On contact with skin, immediately wash with plenty of water.

Quality Control

Physical Appearance

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

Gelling

Firm, comparable with 1.0% Agar gel.

Colour and Clarity of prepared medium

Dark amber coloured, clear gel with blue cast forms in petri plates.

Reaction

Reaction of 5.55% w/v aqueous solution is pH 7.0 \pm 0.2 at 25°C.

pH Range

6.8 - 7.2

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours on addition of 1 vial of Oxford Listeria Supplement (MS2071) or 1 vial of Listeria Moxalactam Supplement (MS2126).

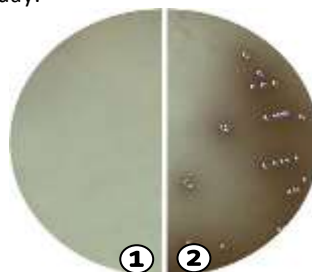
Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Esculin hydrolysis
<i>Bacillus subtilis</i> (6633)	10^3 - 2×10^3	inhibited	>0%	—
<i>Enterococcus faecalis</i> (29212)	10^3 - 2×10^3	inhibited	>0%	—
<i>Enterococcus hirae</i> (10541)	10^3 - 2×10^3	inhibited	>0%	—
<i>Escherichia coli</i> (25922)	10^3 - 2×10^3	inhibited	>0%	—
<i>Listeria monocytogenes</i> (19111)	10^2 - 10^3	luxuriant	>50%	+
<i>Listeria monocytogenes</i> (19112)	10^2 - 10^3	luxuriant	>50%	+
<i>Listeria monocytogenes</i> (19117)	10^2 - 10^3	luxuriant	>50%	+
<i>Staphylococcus aureus</i> (25923)	10^3 - 2×10^3	good	>30%	—

Key : + = Black zone around the colony.

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 day.



VM2145 Listeria Oxford MiVeg Medium Base

1. Control

2. *Listeria monocytogenes*

Further Reading

1. Curtis G.D.W. et al, 1989, Letters In Appl. Microbiol., 8:95.
2. van Netten P., et al, 1988, Int. J. of Food Microbiol., 6:187.
3. Hayes P. S., et al, 1986, Appl. Environ. Microbiol., 51:438.
4. Garayzabal J.F. et al, 1986, Can. J. Microbiol., 32:149.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate.
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