

Specification

Selective supplement used for the isolation of *Listeria* spp

Presentation

10 Freeze dried vials
Vial
with: 3 ± 0.5 ml

Packaging Details

22±0.25 x 55±0.5 mm glass vials, tag labelled, White plastic cap - 10 vials per box.

Shelf Life

49 months

Storage

2-25 °C

Composition

Composition (g/vial)

Polymyxin B.....0.0050
Acriflavine.....0.0025
Ceftazidime.....0.0100

NOTE : Each vial is sufficient to supplement
500ml of PALCAM medium Base.

Reconstitute the original freeze-dried vial
by adding

Sterile Distilled Water..... 6 ml

Description /Technique

Description:

Listeria Agar Base Palcam (Cat. 1141), used with supplements, is a selective and differential medium for *Listeria* spp. It is recommended by ISO 11290 for the detection and enumeration of *Listeria monocytogenes* in food products and clinical samples, and can also be used for environmental samples.

It is used after a primary and secondary enrichment stage, using Listeria Enrichment Broth Base (Cat.1120). It allows the easy differential diagnosis of *Listeria monocytogenes* using a double-system indicator: Esculin/Iron and Mannitol/Phenol red. All *Listeria* species hydrolyze the esculin to esculetin, which reacts with iron ions producing a blackening of the medium.

Lithium chloride included in the medium, along with ceftazidime, polymyxin B sulfate and Acriflavine from the supplement, inhibit the growth of the non-*Listeria* accompanying bacteria present in foods, which can hydrolyze the esculin. Peptones and maize starch provide a rich nutrient base for growth. Yeast extract is the source of vitamins, particularly of the B-group. Glucose is the fermentable carbohydrate. Ferric ammonium citrate improves the growth of *L. monocytogenes*.

The Mannitol/Phenol red differentiation system is used to differentiate *Listeria* spp that do not ferment mannitol from other species that occasionally grow in the medium such as enterococci or staphylococci. Differentiation is achieved by the acid increase in the media, causing the phenol red indicator to change the color of the medium from red to yellow. Confirmation of *Listeria* is done by biochemical and serological identifications tests.

Technique:

Aseptically reconstitute 1 vial with 5 ml of sterile distilled water. Mix gently until complete dissolution. Aseptically add to 500 ml of Listeria Agar Base Palcam (Cat. 1141), autoclaved and cooled to 50 °C. Mix well and distribute into sterile containers.

Instructions for use:

» For clinical diagnosis, the type of sample is amniotic fluid.

- Inoculate on the surface making parallel striae with the handle or swab. - Incubate in aerobic conditions at 35±2 °C for 24-48 hours.

- Reading and interpretation of the results.

» For other uses not covered by the CE marking:

For the detection and enumeration of *Listeria monocytogenes* and *Listeria* spp. according to ISO 11290:

Primary enrichment:

- Weigh 25 g (or 25 ml) of the sample and add 225 ml of Listeria 1/2 Fraser Broth (Cat. 1120 + Cat. 6002). Homogenize and incubate at 30 °C for 25±1 h. Secondary enrichment:

- Inoculate 0,1 ml of the culture of the Listeria 1/2 Fraser Broth incubated (regardless of its color) in 10 ml of Listeria Fraser Broth (Cat. 1120 + Cat. 6001).

Incubate at 37 °C for 24±2 hours under aerobic conditions.

Plaque and identification:

- From the primary enrichment culture, the Listeria Chromogenic Agar Base according to Ottaviani and Agosti (Cat. 1345) is inoculated in order to obtain well separated colonies.

- From the secondary enrichment culture, the procedure is repeated, inoculate the surface of the Listeria Chromogenic Agar Base according to Ottaviani and Agosti, the Palcam Listeria Agar (Cat. 1141) and another medium such as the Oxford Agar (Cat. 1133).

- For Listeria Chromogenic Agar Base according to Ottaviani and Agosti incubate for a total of 48±2 h.

- For Agar Listeria Palcam incubate at 35±2 °C for 24-48 h.

- For Oxford Agar incubate at 35±2 °C for 24-48 h.

Confirmation:

- Select the presumptive colonies and carry out confirmatory tests for *L. monocytogenes* or *Listeria* spp.

Quality control

Physical/Chemical control

Color : Orange

pH: at 25°C

Microbiological control

Add 1 vial to 500 ml of medium base. DO NOT HEAT once supplemented.

Isolation by loop spreading

Aerobiosis. Incubation at 35°C ± 2 °C, reading at 24-48 hours

Microorganism

L. monocytogenes ATCC® 13932, WDCM 00021*Escherichia coli* ATCC® 25922, WDCM 00013*Listeria monocytogenes* ATCC® 35152*Enterococcus faecalis* ATCC® 29212, WDCM 00087

Sterility Control

Incubation 48 hours at 30-35 °C and 48 hours at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

Add 5 ml of the sample to:

Growth

Good - Esculin Positive reaction

Inhibited

Good - Esculin Positive reaction

Inhibited

Bibliography

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