

Specification

A sterile selective supplement used for the isolation of *Listeria* spp.

Presentation

	Packaging Details	Shelf Life	Storage
10 Freeze dried vials			
Vial	22±0,25 x 55±0,5 mm glass vials, tag labelled, White	49 months	2-25°C
with: 3 ± 0,1 g	plastic cap - 10 vials per box.		

Composition

Composition (g/vial)

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

NOTE : Each vial is sufficient to supplement
500 ml of Listeria Palcam Agar.

Reconstitute the original freeze-dried vial
by adding
Sterile Distilled Water..... 6 ml

Description /Technique

Description:

Listeria PALCAM selective supplement is added to PALCAM Medium base in order to obtain a complete selective medium used for the detection and the isolation of *Listeria monocytogenes* from foods.

Palcam Agar is based on the formulation described initially by van Netten *et al.* which has a high selectivity and produces good colonial differentiation. Selectivity is achieved by the inclusion of lithium chloride, acriflavine, polymyxin B and ceftazidime, since they inhibit the growth of almost all the Gram negative and most of the Gram positive companion bacteria.

Listeria hydrolyze esculin to esculetin, which reacts with ferric ammonium citrate producing a dark precipitate and green-grey colonies with beige halos. If colonies of enterococci or staphylococci do grow on this medium they can be easily recognized, since they utilise mannitol and produce yellow colonies and haloes, contrasting with the cherry-red colour of medium.

However, when there are many *Listeria* colonies, the entire medium darkens, which can cause interference in differentiation. In these cases it is advisable to perform the inoculation with a more diluted sample.

Technique:

Collect, dilute and prepare samples and volumes as required according to specifications, directives, official standard regulations and/or expected results.

Reconstitute the vial with the 6 ml sterile distilled water in aseptic conditions and add it to 500 ml of sterilized PALCAM agar base cooled to 50°C. Do not overheat once supplemented.

Pour the complete medium into Petri dishes and, once solidified on a flat surface, spread the plates by streaking methodology or by spiral method.

Incubate the plates in aerobic atmosphere at 37 ± 1°C for 44 ± 4h.

(Incubation times longer than those mentioned above or different incubation temperatures may be required depending on the sample, on the specifications,...)

After incubation, enumerate all the colonies that have appeared onto the surface of the agar, observing any blackening of the medium due to esculin hydrolysis, typical for *Listeria* strains.

Presumptive isolation of *Listeria* sp. must be confirmed by further microbiological and biochemical tests.

Quality control**Physical/Chemical control**

Color : Orange

pH: at 25°C

Microbiological control

Reconstitute 1 vial as indicated in COMPOSITION; shake and dissolve completely

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

Aerobiosis. Incubation at 37 ± 1°C, reading after 24/44 ± 4h

Microorganism*L. monocytogenes* ATCC® 13932, WDCM 00021*Escherichia coli* ATCC® 25922, WDCM 00013*L. monocytogenes* ATCC® 35152, WDCM 00109*Enterococcus faecalis* ATCC® 29212, WDCM 00087**Growth**

Good - Esculin Positive reaction

Inhibited

Good - Esculin Positive reaction

Inhibited

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 5ml of the sample to 100ml of TSB and to 100ml Thioglycollate

Bibliography

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