

TECHNICAL DATA SHEET

Article No. 8439

Palcam Listeria Selective Supplement

SPECIFICATION

Sterile selective supplement for the isolation of *Listerias* spp.

COMPOSITION (G/VIAL)

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

Reconstitute the original freeze-dried vial by adding

Sterile distilled water.....6 ml

Each vial is sufficient to supplement 500 ml of Palcam Listeria Agar (base) (Art. no. 8429).
10 vials with freeze-dried supplement per box.

DESCRIPTION

Palcam Listeria Selective Supplement is added to Palcam Agar (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 Listeria 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 plate method.

Incubate the plates in aerobic atmosphere at 37 ±1 °C for 24-48 ±2 h.

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Amtsgericht Stuttgart / HRB-Nr. 252035
Geschäftsführer: Lutz-Alexander Geyer / Thomas Roth

(Incubation times longer than those mentioned above or different incubation temperatures may be required depending on the sample, on the specifications, etc.) 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* spp. must be confirmed by further microbiological and biochemical tests.

QUALITY CONTROL

- Physical/chemical control: Colour orange
pH at 25 °C
- Microbiological control: Reconstitute 1 vial as indicated, 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 24-48 ±2 h.

Microorganism	Growth	Remarks
<i>Listeria monocytogenes</i> ATCC® 13932	Good – Esculin positive reaction	None
<i>Escherichia coli</i> ATCC® 25922	Inhibited	None
<i>Listeria monocytogenes</i> ATCC® 35152	Good – Esculin positive reaction	None
<i>Enterococcus faecalis</i> ATCC® 29212	Inhibited	None

- Sterility control: Incubation 48 h at 30-35 °C and 48 h at 20-25 °C: No growth.
Check at 7 d after incubation at the same conditions.

REFERENCES

- ATLAS, R.M. (1993) Handbook of Microbiological Media. CRC Press. Boca Raton. Florida.
- ISO 11290 standard (1996) Microbiology of food and animal feeding stuff. Horizontal method for the detection and enumeration of *Listeria monocytogenes*. Part 1 - Detection method. Part 2 - Enumeration method.
- ISO 11133:2014. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- VANDERZANT, C. & D.F. SPLITTSTOESSER (1992) Compendium of methods for the microbiological examination of foods. APHA. Washington DC.
- Van NETTEN, P., J. PERALES, A. van deMOOSDUCK, G.D.W. CURTIS & D.A.A. MOSSEL (1989) Liquid and solid selective differential media for the detection and enumeration of *Listeria monocytogenes*. Int. J. Food Microbiol. 8:299-316.

STORAGE

2-25 °C

SHELF LIFE

49 months from date of production.

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