

PALCAM Agar

Selective medium used for the isolation and differentiation of *Listeria* spp..

*Equally use with MFDS (MB-P1330K).

• CONTENTS (Liter)

Peptone	23.0 g
Mannitol	10.0 g
Sodium Chloride	5.0 g
Starch	1.0 g
Ferric Ammonium Citrate	0.5 g
Esculin	0.8 g
Dextrose	0.5 g
Lithium Chloride	15.0 g
Phenol Red	0.08 g
Agar	13.0 g

Final pH = 7.2 ± 0.2 at 25°C.

• PROCEDURE

Suspend 68.88 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45-50°C in water bath. Aseptically add 2 vials of PALCAM *Listeria* supplement (MB-P1826). Mix well. Dispense in petri dishes.

PALCAM *Listeria* supplement

1 vial contents (each vial is sufficient for 500mL of medium)

Polymyxin B	0.005 g
Ceftazidime	0.01 g
Acriflavine HCl	0.0025 g

• INTERPRETATION

PALCAM (Polymyxin Acriflavin LiCl Ceftazidime Esculin Mannitol) Agar is a medium used for the isolation and detection of *Listeria monocytogenes*. Peptone provides source of nutrients for the organisms. Dextrose, starch and mannitol are the carbohydrate and energy sources. Sodium chloride maintains osmotic balance. Phenol red is the pH indicator dye that exhibits changes in the pH of the medium. *Listeria monocytogenes* hydrolyzes esculin to form esculetin and dextrose. Esculetin reacts with ammonium ferric citrate and forms a brown-black complex seen as a black halo around colonies. *Listeria monocytogenes* does not ferment mannitol but contaminants such as *Enterococci* and *Staphylococci* ferment mannitol and is indicated by color change from red to yellow.

• TECHNIC

Inoculate the plates with spreading the specimen on surface of the medium using a sterile loop. Incubate at 30 °C for 24 - 48 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: light yellow to pink.

Prepared medium

Appearance: clear with no precipitate.

Color: red.

Incubation conditions: 30 °C / 24 - 48 hours

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics
<i>Listeria monocytogenes</i>	19111	50-100	good	gray colonies/ black halo
<i>Listeria monocytogenes</i>	13932	50-100	good	gray colonies/ black halo
<i>Escherichia coli</i>	25922	≥10 ³	inhibited	-
<i>Enterococcus faecalis</i>	29212	≥10 ³	inhibited	-

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8°C.

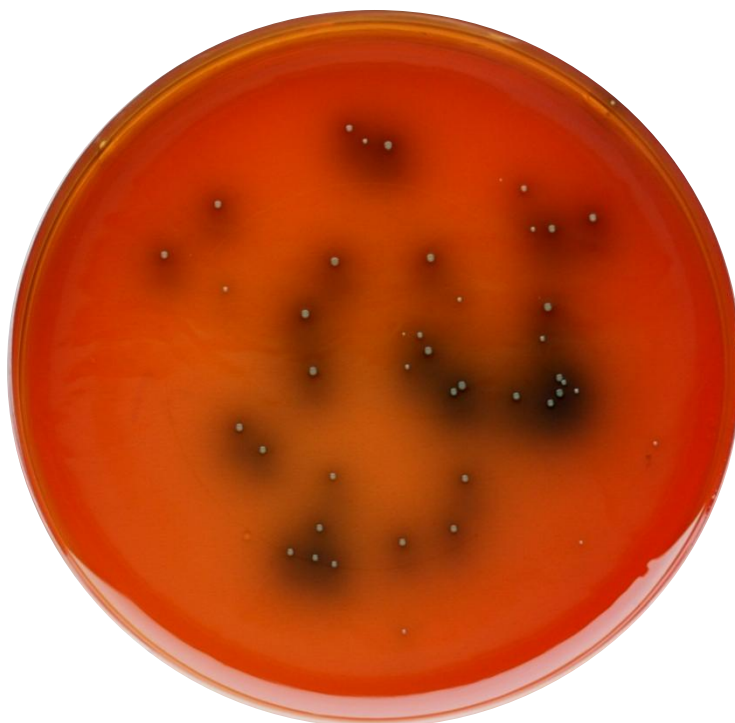
• REFERENCES

1. Van Netten, P. et al.,(1989). J. of Food Microbiol. 8:299-317.
2. AFNOR. (1993). Food Microbiology – “Detection of *Listeria monocytogenes*”. IDF Provisional International Standard n° 143. International Dairy Federation, Brussels.
3. Refer to the MFDS.

• PACKAGE

Cat. No : MB-P1330 PALCAM (Polymyxin Acriflavin LiCl Ceftazidime Esculin Mannitol) Agar	500 G
--	-------

• MICROBIAL CULTURE IMAGES



Listeria monocytogenes ATCC 15313 (100CFU)

Incubation conditions : 35±2°C 48h