PALCAM Broth

Selective medium used for the isolation and differentiation of *Listeria* spp..
*Equally use with QIA (MB-P0894Q)

• CONTENTS (Liter)

Peptone	23.0 g
Mannitol	10.0 g
Sodium Chloride	5.0 g
Yeast Extract	3.0 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

Final pH = 7.2 ± 0.2 at 25°C.

• PROCEDURE

Suspend 58.88 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 tubes.

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) Broth (QIA) 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. *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 specimen with stab using a sterile needle to the medium. Shake gently for spreading microorganisms. Incubate at 30 °C for 24 ± 2 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 ± 2 hours

Microorganism	ATCC	Inoculum CFU	Growth
Listeria monocytogenes	19111	50-100	good
Listeria monocytogenes	13932	50-100	good
Escherichia coli	25922	≥10^3	inhibited
Enterococcus faecalis	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 QIA.

• PACKAGE

Cat. No : MB-P0894 PALCAM (Polymyxin Acriflavin LiCl Ceftazidime Esculin Mannitol) Broth	500 G

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