Listeria Selective Agar (Twin Pack)

M567

Intended Use:

Recommended for selective isolation and cultivation of *Listeria* species from clinical specimens.

Composition**

Ingredients	Gms / Litre
Part A	-
Tryptone	10.000
Peptone	10.000
Dextrose (Glucose)	1.000
Sodium chloride	5.000
Thiaminium dichloride	0.005
Acriflavin hydrochloride (Trypaflavin)	0.010
Nalidixic acid	0.040
Agar	13.000
Part B	-
Potassium thiocyanate	37.500
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 39.0 grams of Part A and 37.5 grams of Part B in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Listeria Selective Agar was proposed by Feindt (1) for the cultivation of *Listeria* species from clinical and non-clinical specimens. Obiger and Schonberg (2) reported the superiority of these media to yield *Listeria* from mix-infected specimens. Tryptone, Peptone provides essential nutrients. Thiaminium dichloride is the vitamin B source added to improve the growth of *Listeria*. Thiocyanate and Nalidixic acid inhibits gram-negative bacteria (3,4). Bockemühl (5) reported suppression of Enterococci by combination of selective agents and acridine dyes. The combination of Acriflavin hydrochloride and Nalidixic acid was recommended by Ralovich et al (6) and Kampelmacher and Van Noorle Jansen (7) for the isolation of *Listeria*. The mix infected specimen is added directly to Listeria Enrichment Broth or subjected to cold enrichment and then cultured on Listeria Selective Agar. Haemolytic forms can be identified by inoculating Blood Agar (M073).

Type of specimen

Clinical samples and Food samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (8,9). For food samples, follow appropriate techniques for sample collection and processing as per guidelines (10). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Some organism may show poor growth due to nutritional variation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Part A : Cream to yellow homogeneous free flowing powder Part B : White to cream homogeneous free flowing powder

Gelling

Firm, comparable with 1.3% Agar gel.

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of medium (3.9% w/v Part A + 3.75% w/v Part B) at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed in presence of 10% Carbon dioxide (CO_2) after an incubation at 35-37°C for 48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Enterococcus faecalis ATCC 29212 (00087*)	50-100	none-poor	<=10%
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	0%
Listeria innocua ATCC 33090 (00017*)	50-100	luxuriant	>=50%
Listeria ivanovii subsp. *ivanovii* ATCC 19119 (00018*)	50-100	luxuriant	>=50%
Listeria monocytogenes ATCC 19112	50-100	luxuriant	>=50%
Listeria monocytogenes ATCC 19118	50-100	luxuriant	>=50%

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store dehydrated and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (8,9).

Reference

1. Feindt E., 1972, Inuug. Diss., Würzburg.
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7. Kampelmacher E.H. and Van Noorle-Jansen L.M., 1972, Zbl. Bakt. J.Orig.,221:139.

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9.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
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IVD ***In vitro*** **diagnostic medical device**

2°C – 8°C **Storage temperature**

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CE Marking

Do not use if package is damaged

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