

# Listeria Selective Agar Base

## Intended Use:

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

#### **Composition\*\***

Ingredients	g / L
Tryptone	17.000
Soya peptone	3.000
Yeast extract	6.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	2.500
Dextrose (Glucose)	2.500
Agar	15.000
Final pH ( at 25°C)	7.3±0.2
**Formula adjusted, standardized to suit performance parameters	

#### Directions

Suspend 51.0 grams 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 and aseptically add rehydrated contents of 1 vial of ANC Selective Supplement (FD063) or 2 vials of ANC Selective Supplement (FD063I) as desired. Mix well and pour into sterile Petri plates.

## **Principle And Interpretation**

*Listeria monocytogenes* has been isolated from numerous environmental sources such as silage, soil, decaying vegetation, sewage, damp earth, straw and faeces (1,2). Listeria Selective Agar Base with Listeria Selective Supplement is used for isolation and cultivation of *L.monocytogenes* from clinical specimens. The basic media is formulated as per Lovett etal (3) with the addition of agar.

Tryptone, Soya peptone and yeast extract provide carbon and nitrogen compounds essential for bacterial metabolism. Dextrose is the energy source. The medium is rendered selective by addition of selective supplement. Amphotericin B inhibits the growth of saprophytic fungi. Nalidixic acid inhibits growth of gram-negative organisms and acriflavin suppresses gram-positive microorganisms (4,5).

Listeria monocytogenes is a highly pathogenic organism and proper precautions should be taken while handling.

## **Type of specimen**

Clinical samples - faecal swabs, vaginal swabs

## **Specimen Collection and Handling:**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (6,7). 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets

## **Limitations :**

Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
The medium is not differential, so further biochemical testing is required for identification between *Listeria species*.

## **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

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Fluorescent yellow coloured, clear to slightly opalescent solution.

#### Reaction

Reaction of 5.1% w/v aqueous solution at 25°C. pH : 7.3±0.2

#### pН

#### 7.10-7.50

#### **Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
<i>Listeria monocytogenes</i> ATCC 19118	50-100	luxuriant	>=50%
Listeria monocytogenes ATCC 19112	50-100	luxuriant	>=50%
Listeria monocytogenes serovar1 ATCC 19111 (00020*)	50-100	luxuriant	>=50%
Escherichia coli ATCC 25922 (00013*)	>=10 <sup>4</sup>	inhibited	0%
Candida albicans ATCC 10231 (00054*)	>=10 <sup>4</sup>	inhibited	0%
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50-100	none-poor	<=10%

#### **Storage and Shelf Life**

Store between 10-30°C in a tightly closed container 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 (6,7).

#### Reference

1. Gray M. L., 1960, Science, 132:1767.

2. Weis J., and Seeliger H. P. R., 1975, Appl. Microbiol. 30:29.

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4. Lee W.K. and McClain D., 1986, Appl. Environ, Microbiol., 52:1215.

5. McClain D. and Lee W.H., 1988, J. Assoc. off. Anal. Chem., 71:660. 6.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

6. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

7. 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





30°C Storage temperature

> Do not use if package is damaged

#### Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia<sup>TM</sup> publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia<sup>TM</sup> Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

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