Saline Lysine Decarboxylase Medium

Intended Use:
Recommended as an identification media to detect lysine decarboxylase activity of *Vibrio parahaemolyticus*.

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeast extract</td>
<td>3.000</td>
</tr>
<tr>
<td>L-Lysine hydrochloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Dextrose (Glucose)</td>
<td>1.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>30.000</td>
</tr>
<tr>
<td>Bromocresol purple</td>
<td>0.015</td>
</tr>
<tr>
<td>pH after sterilization (at 25°C)</td>
<td>6.80</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

Directions
Suspend 39.01 grams in 1000 ml purified/distilled water. Heat, if necessary, to dissolve the medium completely. Dispense the medium in quantities of approximately 2ml in test tube (9 mm x 180mm). Sterilize by autoclaving at 15 lbs pressure (121°C) for 10 minutes.

Principle And Interpretation

*Vibrio parahaemolyticus* is a halophilic estuarine organism. This organism can be isolated from a variety of sea food product and marine environments. The organism, when isolated from fresh sea food, is usually found in low number and is sensitive to refrigeration and heat.

Saline Lysine Decarboxylase Medium is recommended by ISO 8914:1990 (2) for isolating and identification of *Vibrio parahaemolyticus* from food and animal feed.

Yeast extract provide nitrogen compounds, growth factors essential for the growth of *Vibrio parahaemolyticus*. High sodium chloride content of the medium provides conditions that facilitate easy growth of *Vibrio parahaemolyticus*.

During the initial stages of incubation, fermentation of glucose by the organisms, with acid production results in a colour change of indicator to yellow. On further incubation, if L-Lysine is decarboxylated to cadaverine, there will be an alkaline reaction and indicator colour will then change to purple. If colour remains yellow, the decarboxylase reaction is negative.

Yeast extract provide essential growth nutrients. Glucose is the fermentable carbohydrate and bromocresol purple is the pH indicator.

Inoculate, suspected colony from Saline Nutrient Agar (M1776), just below the surface of Saline Lysine Decarboxylase medium and incubate at 35-37°C for 24 hrs. A purple colour and turbidity, after incubation, indicates a positive reaction.

Type of specimen
Clinical samples - faeces; Food and dairy samples.

Specimen Collection and Handling:
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,5,6). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions:
In Vitro diagnostic Use. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/f 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:

1. Further biochemical and serological tests must be carried out for further identification on Saline Nutrient Agar (M1776)

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
Light yellow to greenish yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Purple coloured clear solution forms in tube

Reaction
Reaction of 3.9% w/v aqueous solution after sterilization at 25°C. pH : 6.80

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours. (Inoculated tubes are overlayed with sterile mineral oil).

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Lysine decarboxylation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibrio parahaemolyticus</td>
<td>50-100</td>
<td>Positive (Purple colour with turbidity)</td>
</tr>
<tr>
<td>ATCC 17802 (00037*)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life
Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°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. Use before expiry date on the label.

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 (3,4).

Reference


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Please refer disclaimer Overleaf.
**Disclaimer:**

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**Technical Data**

<table>
<thead>
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<th>In vitro diagnostic medical device</th>
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<td>CE Marking</td>
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**Storage temperature**

- 10°C - 30°C

**Do not use if package is damaged**

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