**L.M. Slant (Loeffler Medium)**

**Intended Use:**
Recommended for cultivation of *Corynebacteria*, especially *Corynebacterium diphtheriae*.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / 250ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone, special</td>
<td>2.500</td>
</tr>
<tr>
<td>HM peptone B #</td>
<td>2.500</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>1.250</td>
</tr>
<tr>
<td>Dextrose (Glucose)</td>
<td>2.500</td>
</tr>
<tr>
<td>Horse serum</td>
<td>750.00 ml</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.3±0.2</td>
</tr>
</tbody>
</table>

# Equivalent to Beef extract

**Formula adjusted, standardized to suit performance parameters**

**Directions**

Streak the test inoculum aseptically into the slant and incubate at appropriate conditions. Incubate the slants at 30-35°C for 18-24 hours.

**Principle And Interpretation**

Loeffler Medium was originally devised by Loeffler (1) and was further modified by Perry and Petran (2) and Buck (3). Loeffler medium enhances primary and secondary isolation and cultivation of fastidious pathogenic microorganisms especially from nose and throat. It also restores virulence and other identifying properties (microscopic and colonial) after they have been lost due to prolonged incubation or repeated subculturing.

The high serum content helps in determining proteolytic activity of organisms. It is also used for demonstration of pigmentation and ascospores. Peptone special, HM peptone B provide essential growth nutrients. Dextrose is the source of fermentable carbohydrate and energy.

Rub the swabs directly over the surface of medium and after incubation; prepare the smears from surface of slope. For proteolysis testing, inoculate slant and prior to incubation, flood the slant with Brewer Thioglycollate Medium (M019). Incubation should be carried out for 3-4 days or much longer for appearance of proteolysis. Loeffler Medium should be used in parallel with Serum Tellurite Agar for selective isolation of Corynebacteria (4).

**Type of specimen**

Clinical samples- a nasopharyngeal and throat swabs

**Specimen Collection and Handling:**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines ((2,3)). After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions:**

In Vitro diagnostic 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. Use only. Read the label before opening the container. Wear protective gloves/

**Limitations:**

1. For optimum recovery of *C. diphtheriae*, a nasopharyngeal and throat swab should be obtained while collection of specimen.
**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**
Sterile Loeffler's Medium slant in glass tube.

**Colour of medium**
Yellowish white coloured medium

**Quantity of Medium**
8ml of medium in glass tube

**Reaction**
7.10-7.50

**Sterility Test**
Passes release criteria

**Cultural Response**
Cultural characteristics observed with added 750ml horse serum, after an incubation at 35-37°C for 24-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corynebacterium diphtheriae ATCC 11913</td>
<td>50-100</td>
<td>fair-good</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa ATCC 10145 (00024*)</td>
<td>50-100</td>
<td>good (green colonies with proteolysis)</td>
</tr>
<tr>
<td>Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)</td>
<td>50-100</td>
<td>good (yellow to gold colonies)</td>
</tr>
</tbody>
</table>

Key : *Corresponding WDCM numbers.

**Storage and Shelf Life**
On receipt store between 2-8°C 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 (2,3).

**Reference**

Revision : 00 /2019
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™ 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™ 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 diagnostic or therapeutic use but for laboratory, 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.