Luria Bertani Agar, Modified

Luria Bertani Agar, Modified is used for the cultivation and maintenance of recombinant strains of *Escherichia coli* and may be used for routine cultivation of not particularly fastidious microorganisms.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casein enzymic hydrolysate</td>
<td>10.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Agar</td>
<td>10.000</td>
</tr>
<tr>
<td><strong>Final pH ( at 25°C)</strong></td>
<td>7.2±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 30 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Dispense as desired.

**Principle And Interpretation**

Luria Bertani Agar, Modified is prepared as described by Lennox (1) for cultivation and maintenance of recombinant strains of *Escherichia coli*. The medium is nutritionally rich for the growth of pure cultures of recombinant strains. Strains generally derived from *Escherichia coli K12* are deficient in Vitamin B synthesis which are further modified by specific mutation to create auxotrophic strains and are unable to grow on nutritionally deficient media.

Casein enzymic hydrolysate provides peptides and peptones while Vitamin B complex is provided by yeast extract. Sodium chloride provides sodium ions for the membrane transport and maintains osmotic equilibrium of the medium.

**Quality Control**

**Appearance**

Cream to yellow Homogeneous Free flowing powder

**Gelling**

Firm, comparable with 1.0% Agar gel.

**Colour and Clarity of prepared medium**

Yellow to amber Clear to slightly opalescent

**Reaction**

Reaction of 3.0% w/v aqueous solution at 25°C. pH : 7.2±0.2

**pH**

7.00-7.40

**Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Escherichia coli ATCC 23724</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
</tr>
<tr>
<td><em>Escherichia coli ATCC 25922</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
</tr>
</tbody>
</table>

**Storage and Shelf Life**

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.
Reference
1. Lennox E.S., 1955, Transduction of Linked Genetic Characters of the host by bacteriophage P1., Virology, 1:190.

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