HiEncap™ Luria Bertani Agar, Miller is used for the cultivation and maintenance of recombinant strains of *Escherichia coli* for genetic and molecular studies and may be used for routine cultivation of other non-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>10.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.5±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

### Directions

Each capsule contains 20 gms of medium. Suspend 1 capsule in 500 ml (2 capsules in 1000 ml) distilled or purified water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Dispense as desired. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

Luria Bertani Agar is prepared as described by Lennox (1) for cultivation and maintenance of recombinant strains of *Escherichia coli*. Luria Bertani Agar, Miller (2) is slightly different with double amount of sodium chloride. The media is nutritionally rich for the growth of pure cultures of recombinant strains. Strains derived from *Escherichia coli* K12 are deficient in Vitamin B synthesis are further modified by specific mutation to create auxotrophic strains and are therefore 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 membrane transport and also maintains the osmotic equilibrium of the medium.

### Quality Control

**Appearance**

Gelatin capsule containing cream to yellow coloured granular media

**Gelling**

Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**

Yellow to amber coloured, clear to slightly opalescent gel forms in Petri plates

**Quantity**

Each capsule contains 20 grams of medium sufficient for 500 ml media

**Reaction**

Reaction of 4.0% w/v aqueous solution at 25°C, pH: 7.5±0.2

**pH**

7.30-7.70

**Cultural Response**

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

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

Please refer disclaimer Overleaf.
Escherichia coli ATCC 25922 luxuriant 50-100 >=70%

Escherichia coli DH5 alpha MTCC 1652 luxuriant 50-100 >=70%

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.