NZYDT Growth Agar

NZYDT Growth Agar is used for lambda and filamentous phage.

Composition**:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Grams/Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casein enzymic hydrolysate</td>
<td>10.00</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>5.00</td>
</tr>
<tr>
<td>MgSO₄. 7H₂O</td>
<td>1.00</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.00</td>
</tr>
<tr>
<td>Thymidine</td>
<td>0.04</td>
</tr>
<tr>
<td>Agar</td>
<td>15.00</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

Directions:

Suspend 35.53 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. Mix well and dispense as desired.

Principle and Interpretation:

NZYDT Growth Agar is used for lambda and filamentous phage. This medium was developed by Blattner and colleagues as a rich medium for the propagation of bacteriophages (1). Cells grow very fast in this medium as this medium provides all the amino acids, vitamins and other metabolites required for cell growth (2). Casein enzymic hydrolysate provides nitrogen, amino acids, and carbon sources for the cells. Yeast extract functions as the source of vitamins and trace elements. Sodium chloride provides sodium ions for transport and osmotic balance and Magnesium sulfate is a source of magnesium ions required in a variety of enzymatic reactions, including DNA replication (3). This medium contains agar as the solidifying agent. NZYDT Growth Agar allows the cells to grow more rapidly as they do not have to synthesize nucleotide precursors and other factors required for growth.

Quality Control:

Appearance of Powder:

Cream to yellow coloured, homogeneous, free flowing powder.

Gelling:

Firm, comparable with 1.5% Agar gel.

Please refer disclaimer Overleaf
Colour and Clarity:
Light yellow coloured, clear solution without any precipitate.

Cultural Response:
Cultural characteristics observed after an incubation at 35-37°C for 18 - 48 hours.

Organisms (ATCC) Growth
Escherichia coli ATCC 23724 good-luxuriant
Escherichia coli ATCC 25922 good-luxuriant
Escherichia coli MTCC1652 good-luxuriant

Storage and Shelf-life:
Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.

References: