Standard Nutrient Agar, Modified

**Intended use**

Standard Nutrient Agar Modified is recommended for the cultivation and enrichment of less fastidious bacteria.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone from meat</td>
<td>3.450</td>
</tr>
<tr>
<td>Peptone from casein</td>
<td>3.450</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.100</td>
</tr>
<tr>
<td>Agar</td>
<td>13.000</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**

Suspend 25 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. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

**Principle And Interpretation**

Fastidious organisms are organisms which require preformed organic molecules like vitamins, amino acids, nucleic acids, carbohydrates. In general bacterial pathogens need more preformed organic molecules than do nonpathogens. Media which are highly nutritional are generally used to enrich less fastidious organism so as to isolate them from test samples.

Standard Nutrient Agar, Modified can be used in the detection of inhibitors during the bacteriological examination of meat (1). This medium can also be modified with various additives (2).

Peptone from meat and casein in the medium provides the nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential nutrients. Sodium chloride maintains the osmotic equilibrium of the medium.

**Quality Control**

**Appearance**

Cream to yellow homogeneous free flowing powder

**Gelling**

Firm, comparable with 1.3% Agar gel

**Colour and Clarity of prepared medium**

Dark amber to amber coloured clear to slightly opalescent gel forms in Petri plates

**Reaction**

Reaction of 2.5% w/v aqueous solution at 25°C. pH : 7.5±0.2

**pH**

7.30-7.70

**Cultural Response**

M2022: Cultural characteristics observed after an incubation at 35-37°C for 18-48 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 11775</em></td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
</tr>
<tr>
<td><em>Shigella flexneri ATCC 29903</em></td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
</tr>
<tr>
<td><em>Salmonella Typhimurium ATCC 13311</em></td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
</tr>
</tbody>
</table>
**Storage and Shelf Life**

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder 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**


**Disclaimer**

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