Nutrient Agar 1.5%

Intended use

Nutrient Agar 1.5% is a general purpose nutrient medium which can be used for cultivation of bacteria not requiring a highly nutritious medium. The medium can also be enriched with blood, ascitic fluid or other enriching fluids.

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>HM Peptone B*</td>
<td>3.000</td>
</tr>
<tr>
<td>Peptone</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>8.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.3±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

#- Equivalent to Beef extract

Directions

Suspend 31.0 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. If desired, it can be appropriately enriched with sterile blood, ascetic fluid or serum after cooling to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Nutrient Agar 1.5% is the modification of Nutrient Agar recommended by APHA for cultivation and maintenance of non-fastidious microorganisms (1). This medium is used as a general-purpose medium. Recently ISO Committee (6) has also recommended it with slight modification for sub cultivation of *Pseudomonas* species isolated from meat and meat products.

Peptone is the principal source of organic nitrogen while HM Peptone B provides carbohydrates, vitamins, organic nitrogen compounds and salts. Nutrient Agar 1.5% may be used for blood culturing work after the addition of sterile 5-10% v/v defibrinated blood. Sodium chloride makes the medium isotonic preventing haemolysis of red blood corpuscles.

Type of specimen

Clinical samples - Blood ; Food and dairy samples ; Water samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,5,7).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (2).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions:

In Vitro diagnostic Use. 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.

Limitations:

1. This medium is general purpose medium and may not support the growth of fastidious organisms.

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

Cream to yellow homogeneous free flowing powder
Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of Prepared medium
Yellow coloured clear gel forms in Petri plates. With the addition of blood Cherry red coloured opaque gel forms in Petri plates.

Reaction
Reaction of 3.1% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH
7.10-7.50

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>Escherichia coli ATCC 25922 (00013*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa ATCC 27853 (00025*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
</tr>
<tr>
<td>Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
</tr>
</tbody>
</table>

Key : *Corresponding WDCM numbers.

Storage and Shelf Life
Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order 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
In vitro diagnostic medical device

CE Marking

Storage temperature

Do not use if package is damaged

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