B.T.B. Lactose HiCynth™ Agar

**Intended Use:**
Recommended for isolation of pathogenic Staphylococci.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>HiCynth™ Peptone No.5*</td>
<td>8.000</td>
</tr>
<tr>
<td>Lactose</td>
<td>10.000</td>
</tr>
<tr>
<td>Bromo thymol blue</td>
<td>0.170</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>8.6±0.2</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 33.17 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. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

**Principle And Interpretation**

*Staphylococcus* are known to be pathogenic to man and other mammals. Although this organism is frequently a part of the normal human microflora, it can cause significant opportunistic infections under appropriate conditions (2). Traditionally *Staphylococci* are divided into two groups on the basis of their ability to clot blood plasma (the coagulase reaction). The coagulase-positive *Staphylococci* constitute the most pathogenic species, *Staphylococcus aureus*. B.T.B Lactose Agar (1) designed by Chapman et al (3), is used in the detection and isolation of pathogenic *Staphylococci*. On this media *Staphylococci* are differentiated by their ability to grow at a high pH and in the presence of bromothymol blue. B.T.B Lactose HiCynth™ Agar is prepared by replacing animal and vegetable peptones with chemically defined peptones to avoid BSE/TSE risks associated with animal peptones. HiCynth™ Peptone No.5 serves as a source of carbon, nitrogen, long chain amino acids, vitamins and other essential nutrients. Lactose is the fermentable carbohydrate with bromothymol blue as an indicator. Plates should be inoculated preferably by spread plate technique and incubated for about 36 hours at 35°C. Typical colonies appear deep yellow (90% approx.) or blue grey (10% approx.). Coliforms may grow but are differentiated by their appearance.

**Type of specimen**
Clinical samples :skin and mucous membranes

**Specimen Collection and Handling**
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions**
In Vitro diagnostic use only. 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. Further biochemical and serological tests must be carried out for complete identification.

**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 greenish yellow homogeneous free flowing powder
Gelling
Firm, comparable with 1.5% Agar gel
Colour and Clarity of prepared medium
Greenish blue coloured, clear to slightly opalescent gel forms in Petri plates
Reaction
Reaction of 3.32% w/v aqueous solution at 25°C. pH : 8.6±0.2
pH
8.40-8.80
Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
<th>Colour of colony</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escherichia coli ATCC 25922 (00013*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>yellow</td>
</tr>
<tr>
<td>Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>golden yellow</td>
</tr>
<tr>
<td>Salmonella Typhi ATCC 6539</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>blue/colourless</td>
</tr>
<tr>
<td>Staphylococcus aureus subsp. aureus ATCC 6538 (00032*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>golden yellow</td>
</tr>
<tr>
<td>Staphylococcus epidermidis ATCC 12228 (00036*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>blue/colourless</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. 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 (4,5).

Reference
Disclaimer:

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