Casitose Soya Blood Agar Base

Intended use
Recommended for cultivating fastidious microorganisms and study haemolytic reactions.

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptone, special</td>
<td>15.000</td>
</tr>
<tr>
<td>Soya peptone</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</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

Directions
Suspend 40 grams in 1000ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add 7% sterile sheep blood. Mix well and pour into sterile Petri plates.

Principle And Interpretation
Casitose Soya Agar, Modified is a nutrient medium, which can be used as a base medium as well as an un-supplemented medium. Casitose Soya Agar, Modified is a modified version of Tryptone Soya Agar, which is supplemented with 5-10% sterile blood. This medium is used for cultivation of fastidious organisms and for determining haemolytic reactions. The medium can be used in differentiation of Streptococcus species. The medium is supplemented with growth factors to achieve a better growth of fastidious microorganisms. Blood is the most common additive for Tryptone Soya Agar and it can be added at different concentrations between 5 and 15%.

Tryptone, special and soya peptone in the medium provide organic nitrogen and amino acids. Sodium chloride maintains osmotic balance of the medium. Sheep blood stimulates excellent growth and aids in the formation of appropriate hemolytic reactions of fastidious organisms. The medium with 5% horse blood supplies both X and V factors that are growth requirements for certain organisms; e.g. Haemophilus influenzae. Haemolytic reactions displayed by defibrinated horse blood differ from those of sheep blood (3).

Type of specimen
Food samples.

Specimen Collection and Handling
For food, follow appropriate techniques for sample collection and processing as per guidelines (4). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions
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. Addition of Horse blood or rabbit blood to base medium supports growth of H. haemolyticus but resemble beta-haemolytic Streptococci and hence must be confirmed.
2. Haemolytic pattern varies with the source of blood used.
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
Basal Medium : Light yellow coloured clear to slightly opalescent gel. After addition of 7%w/v sterile defibrinated blood : Cherry red coloured opaque gel forms in Petri plates

pH
7.10-7.50

Cultural response

Cultural characteristics was observed after an incubation for Bacterial at 30-35°C 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Observed Lot value (CFU)</th>
<th>Recovery</th>
<th>Observed Lot value (CFU) w/blood</th>
<th>Recovery w/ blood</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Streptococcus pyogenes</em> ATCC 19615</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>35 -100</td>
<td>&gt;=70 %</td>
<td>35 -100</td>
<td>18 -24 hrs</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> subsp. aureus ATCC 25923 (00034*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>35 -100</td>
<td>&gt;=70 %</td>
<td>35 -100</td>
<td>18 -24 hrs</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> subsp. aureus ATCC 6538 (00032*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>35 -100</td>
<td>&gt;=70 %</td>
<td>35 -100</td>
<td>18 -24 hrs</td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 25922 (00013*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>35 -100</td>
<td>&gt;=70 %</td>
<td>35 -100</td>
<td>18 -24 hrs</td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 8739 (00012*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>35 -100</td>
<td>&gt;=70 %</td>
<td>35 -100</td>
<td>18 -24 hrs</td>
</tr>
<tr>
<td><em>Streptococcus pneumoniae</em> ATCC 6303</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>35 -100</td>
<td>&gt;=70 %</td>
<td>35 -100</td>
<td>18 -24 hrs</td>
</tr>
<tr>
<td><em>Neisseria meningitidis</em> ATCC50 -100</td>
<td>luxuriant</td>
<td>35 -100</td>
<td>&gt;=70 %</td>
<td>35 -100</td>
<td>18 -24 hrs</td>
<td></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 2-8°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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).
Reference


Disclaimer:

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