Casitose Soya Agar, Modified

Intended Use:
Recommended as a general purpose medium for cultivation of various microorganisms.

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptone</td>
<td>14.500</td>
</tr>
<tr>
<td>Soya peptone</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Growth factors</td>
<td>1.500</td>
</tr>
<tr>
<td>Agar</td>
<td>14.000</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 1000 ml purified / distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 minutes. DO NOT OVERHEAT. Cool to 45-50°C. For preparation of blood plates, add 5-10% v/v sterile, defibrinated blood to the sterile medium. 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 unsupplemented 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 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.

Type of specimen
Food and dairy samples; Water samples

Specimen Collection and Handling:
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,6,7). 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:
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 specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations:
1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
2-Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user’s unique requirement.
3. Further biochemical and serological tests must be carried out for further identification.

Please refer disclaimer Overleaf.
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 1.4% Agar gel

Colour and Clarity of prepared medium
Basal medium: Yellow to tan coloured clear to slightly opalescent gel. After addition of 5-7% w/v sterile defibrinated blood: Cherry red coloured opaque gel forms in Petri plates

Reaction
Reaction of 4.0% w/v aqueous solution at 25°C. pH: 7.3±0.2
pH
7.10-7.50

Cultural Response
Cultural characteristics observed with added 5% w/v sterile defibrinated blood 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>
<th>Haemolysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Streptococcus pneumonia</em> ATCC 6305</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>alpha</td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 25922 (00013*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>beta</td>
</tr>
<tr>
<td><em>Listeria monocytogenes</em> ATCC 19115</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>beta</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> subsp. aureus ATCC 25923 (00035*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>beta</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> subsp. aureus ATCC 6538 (00032*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>beta</td>
</tr>
<tr>
<td><em>Streptococcus pyogenes</em> ATCC 19615</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>beta</td>
</tr>
<tr>
<td><em>Streptococcus pyogenes</em> ATCC 49117</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>beta</td>
</tr>
<tr>
<td><em>Shigella dysenteriae</em> ATCC 9361</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>none</td>
</tr>
<tr>
<td><em>Candida albicans</em> ATCC 10231 (00054*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>none</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 (3,4).
Reference


Disclaimer:

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.