Universal Fastidious Culture Agar

**Intended Use:**
Recommended for the cultivation of fastidious microorganisms when enriched with blood.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>HM peptone</td>
<td>5.000</td>
</tr>
<tr>
<td>Gelatin peptone</td>
<td>5.000</td>
</tr>
<tr>
<td>Casitose ▲</td>
<td>3.500</td>
</tr>
<tr>
<td>Tryptone</td>
<td>3.500</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>3.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Agar</td>
<td>10.000</td>
</tr>
</tbody>
</table>

**Directions**
Suspend 35 grams in 1000ml 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. The medium can be enriched by adding 5-10 % defibrinated sheep or horse blood to the cooled base medium. Mix well and pour into sterile Petri plates.

**Principle And Interpretation**
Universal Fastidious Culture Agar is a basic culture media for cultivation of fastidious organisms by enriching the basal medium with blood. It is non-selective media useful in routine cultivation of microorganisms. It can be used for the cultivation and enumeration of bacteria which are not particularly fastidious. Addition of different biological fluids such as horse or sheep blood, serum, egg yolk etc. makes it suitable for the cultivation of related fastidious organisms.
HM peptone, gelatin peptone, tryptone, casitose and yeast extract provide the necessary nitrogen, carbon compounds, long chain amino acids, vitamins and also some trace ingredients necessary for the growth of bacteria. Sodium chloride maintains the osmotic equilibrium of the medium.

**Type of specimen**
Clinical samples; Food & dairy samples; Water samples; soil samples.

**Specimen Collection and Handling**
For Clinical samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4). For Food & dairy samples, follow appropriate techniques for sample collection, processing as per guidelines (1,5,7). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (2). For soil samples, follow appropriate techniques for sample collection and processing as per guidelines (6). 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. It is not recommended for the recovery of acutely fastidious organisms such as *Helicobacter pylori*, *Legionella pneumophila* or *Bartonella (Rochalimaea) henselae*.
2. 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 1.5% Agar gel

Colour and Clarity of prepared medium

Basal Medium: Light yellow 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

Cultural response

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

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
<th>Growth w/ blood</th>
<th>Recovery w/ blood</th>
<th>Haemolysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streptococcus pyogenes ATCC 19615</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td></td>
</tr>
<tr>
<td>Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>beta</td>
</tr>
<tr>
<td>Enterococcus durans ATCC 10541 50 -100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>alpha</td>
<td></td>
</tr>
<tr>
<td>Enterococcus faecalis ATCC 50 -100 29212 (00087*)</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Salmonella Typhimurium ATCC 13311 (00121*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td></td>
</tr>
<tr>
<td>Shigella flexneri ATCC 12022 (00126*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>none</td>
</tr>
</tbody>
</table>

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store below 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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference


Please refer disclaimer Overleaf.

Disclaimer:

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