Schaedler Broth

Intended Use
Recommended for the recovery of anaerobic and facultative microorganisms. *Sterile, in glass bottles.*

Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptone</td>
<td>5.670</td>
</tr>
<tr>
<td>Proteose peptone</td>
<td>5.000</td>
</tr>
<tr>
<td>Soya peptone</td>
<td>1.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>5.000</td>
</tr>
<tr>
<td>Dextrose (Glucose)</td>
<td>5.830</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>1.670</td>
</tr>
<tr>
<td>Dipotassium hydrogen phosphate</td>
<td>0.830</td>
</tr>
<tr>
<td>Tris (hydroxymethyl) aminomethane</td>
<td>3.000</td>
</tr>
<tr>
<td>L-Cystine</td>
<td>0.400</td>
</tr>
<tr>
<td>Hemin</td>
<td>0.010</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.6±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

Directions
Label the ready to use blood culture bottle. Remove the Aluminium foil cap. Disinfect the part of the rubber stopper which is now exposed. Draw patient's blood with the sterile or disposable needle and syringe as explained in specimen collection and disposable column. Transfer the blood sample immediately into the culture bottle by puncturing the rubber stopper with the needle and injecting the blood. Venting: Use sterile venting needle (LA038). Keep the bottle in an upright position preferably in a biological safety cabinet, place an alcohol swab over the rubber stopper and insert the venting needle with filter through it. Insertion and withdrawal of the needle should be done in a straight line. discard the needle and mix the contents by gently inverting the bottle 2-3 times. Do Not vent the bottle for anaerobic cultures. Incubate at 35-37°C for 18-24 hours. and further for seven days.

Principle And Interpretation
Schaedler Broth was originally formulated by Schaedler et al (8) and modified by Mata et al (7) with composition changes (6). It serves as an excellent basal medium to which blood or other enrichments can be added to enhance the recovery of fastidious anaerobic organisms. Stalons et al (9) found this medium to be most effective medium for the growth of obligately anaerobic bacteria in an atmosphere of 5% carbon dioxide, 10% hydrogen and 85% Nitrogen. It can also be used to determine antibiotics MIC levels of anaerobic organisms (9). Fass et al used (1) tube method for antibiotic MIC determination.
Schaedler broth is highly nutritious medium due to tryptone, proteose peptone, soya peptone and yeast extract. Sodium Polyanethole Sulphonate (SPS) which is an anticoagulant in culture bottles promotes optimal recovery of organisms from blood (10). It acts to inhibit phagocytosis and to neutralize the antibacterial activity of fresh blood components (2,5).

Type of specimen
Clinical samples - Blood, Faeces, Pus, etc.

Specimen Collection and Handling
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4). 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. Proper anaerobic conditions must be maintained for optimal recovery of 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
Sterile, clear Schaedler Broth in glass bottle.

Colour
Yellow coloured clear solution

Quantity of Medium
70ml of medium in glass bottle. (For Adult Use)

Reaction
7.40-7.80

Sterility test
Passes release criteria

Cultural response
Cultural characteristics was observed after incubation at 35-37°C for 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth under anaerobic conditions</th>
<th>Growth under aerobic conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacteroides fragilis ATCC 25285</td>
<td>50-100</td>
<td>luxuriant</td>
<td>-</td>
</tr>
<tr>
<td>Clostridium butyricum ATCC 13732</td>
<td>50-100</td>
<td>luxuriant</td>
<td>-</td>
</tr>
<tr>
<td>Clostridium perfringens ATCC 12924</td>
<td>50-100</td>
<td>luxuriant</td>
<td>-</td>
</tr>
<tr>
<td>Clostridium sporogenes ATCC 11437</td>
<td>50-100</td>
<td>luxuriant</td>
<td>-</td>
</tr>
<tr>
<td>Escherichia coli ATCC 25922 (00013*)</td>
<td>&gt;=10⁴</td>
<td>luxuriant</td>
<td>-</td>
</tr>
<tr>
<td>Streptococcus pyogenes ATCC 19615</td>
<td>50-100</td>
<td>-</td>
<td>luxuriant</td>
</tr>
</tbody>
</table>

Key : *Corresponding WDCM numbers.

Storage and Shelf Life
Store between 15-25°C. 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).

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Reference


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