Tryptose Broth

Tryptose Broth is recommended for the cultivation primarily of Brucella.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptose</td>
<td>20.000</td>
</tr>
<tr>
<td>Dextrose</td>
<td>1.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</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 26 grams in 1000 ml distilled water. If desired, add 0.5 - 1% agar to the medium. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle And Interpretation**

Huddleson used Tryptose media for the isolation of Brucella species from man (1). Tryptose containing media, rather than the conventionally used meat infusion media have been used for the enumeration and isolation of Brucella species (2, 3).

Tryptose Broth is also recommended by APHA (4) and FDA (5). This medium can be used as general purpose media for cultivation of wide variety of organisms. It can also be supplemented with defibrinated blood (sheep, horse) to prepare blood containing medium for the isolation of fastidious organisms like Brucella. Tryptose Broth can be supplemented with 0.1% agar for the cultivation of anaerobes.

Dextrose is the source of energy. Tryptose serves as nitrogen source while sodium chloride maintains osmotic equilibrium.

**Quality Control**

**Appearance**

Cream to yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Basal Medium : Yellow coloured, clear solution. With addition of 5% v/v sterile defibrinated blood, cherry red coloured, opaque solution forms in tubes.

**Reaction**

Reaction of 2.6% w/v aqueous solution at 25°C. pH : 7.3±0.2

**pH**

7.10-7.50

**Cultural Response**

M177: Cultural characteristics observed after an incubation at 35-37°C for 48-72 hours with added 5% v/v sterile defibrinated blood in presence of 10% Carbon dioxide (CO2).

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Brucella melitensis</em> ATCC 4309</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td><em>Brucella suis</em> ATCC 4314</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td><em>Streptococcus pneumoniae</em> ATCC 6303</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td><em>Streptococcus pyogenes</em> ATCC 19615</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
</tbody>
</table>
Storage and Shelf Life
Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference