Tryptic Digest Broth (Fields Tryptic Digest Broth)

Tryptic Digest Broth is used for cultivation of fastidious microorganisms.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptic digest of beef heart</td>
<td>10.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Dextrose</td>
<td>1.000</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**

Suspend 16 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool below 50°C and aseptically add sterile enrichment such as blood, serum or ascitic fluid as required.

**Principle And Interpretation**

Infusion based media are routinely employed for the cultivation of fastidious organisms. These media suffice complex nutritional requirements of most of the organisms. Field (1) formulated Tryptic Digest Broth for cultivation of fastidious microorganisms. Supplementation of the medium with serum, blood or ascitic fluid, it supports the growth of fastidious organisms such as, *Neisseria meningitides*, *Haemophilus influenzae*, *Streptococcus pneumoniae* etc. (2). Shepard et al (3) described its use for culturing *Streptococcus pneumoniae* and *Actinomycetes*.

Tryptic digest of beef heart provides carbonaceous and nitrogenous compounds and other essential growth nutrients for growth of fastidious microorganisms. Blood serum or ascitic fluid provides additional growth factors.

**Quality Control**

**Appearance**

Cream to light yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Basal Medium : Light yellow coloured clear solution. After addition of blood, cherry red coloured and with added serum or ascitic fluid, dark yellow coloured, opaque or clear to slightly opalescent solution respectively.

**Reaction**

Reaction of 1.6% w/v aqueous solution at 25°C. pH : 7.6±0.2

**pH**

7.40-7.80

**Cultural Response**

M1028: Cultural characteristics observed with added blood, serum or ascitic fluid after incubation at 35-37°C for 24 - 48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bordetella pertussis ATCC</em> 8467</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Haemophilus influenzae ATCC 35056</em></td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Neisseria meningitidis ATCC50-100</em> 13090</td>
<td>luxuriant</td>
<td></td>
</tr>
<tr>
<td><em>Staphylococcus aureus ATCC 25923</em></td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
</tbody>
</table>
**Streptococcus pneumoniae**  
*ATCC 6303*  
50-100 luxuriant

**Streptococcus pyogenes**  
*ATCC 19615*  
50-100 luxuriant

**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**