**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>Yeast extract</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>6.9±0.2</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 30 grams in 1000 ml distilled water. Heat if necessary, to dissolve the medium completely. Dispense in flasks or tubes. Add Salicin (1%) or Raffinose (1%) as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Incubate media for 24 hours at 35°C transfer 1 ml culture to test tube and add 1-2 drops 0.04% phenol red. Yellow colour indicates acid production from salicin. Re-incubate media for additional 48 hours.

**Principle And Interpretation**

_Clostridium perfringens_ produces a heat-resistance enterotoxin which causes food-poisoning if ingested. In perfringens poisoning, the vehicle is almost always an improperly cooked meat (1). The heat resistance of its spores often allows _C. perfringens_ to survive incomplete cooking of food, with the surviving bacteria then able to cause food poisoning (2). This makes detection and isolation of these organisms from food important. Tryptose Yeast Extract Broth is recommended by AOAC (3) for the confirmation of _C. perfringens_ in foods.

Tryptose and yeast extract provide necessary nutrients to the organisms. Sodium chloride maintains the osmotic equilibrium. Addition of salicin or raffinose helps in distinguishing clostridia species. Salicin is usually not fermented by _C. perfringens_ but is rapidly fermented with production of acid and gas by other species. Acid is usually produced from raffinose by _C. perfringens_ but not by other species. Addition of 1-2 drops of 0.04% phenol red to the culture after incubation helps in the detection of acid production (yellow colour).

**Quality Control**

**Appearance**
Cream to yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**
Yellow coloured clear solution without any precipitate.

**Reaction**
Reaction of 3.0% w/v aqueous solution at 25°C. pH: 6.9±0.2

**pH**
6.70-7.10

**Cultural Response**
M988: Cultural characteristics observed when incubated anaerobically, after an incubation at 35-37°C for 18-72 hours, after addition of phenol red indicator.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Acid from Salicin</th>
<th>Acid from Raffinose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clostridium perfringens ATCC 12924</td>
<td>50-100</td>
<td>luxuriant</td>
<td>negative reaction, no colour change or red</td>
<td>positive reaction, yellow colour</td>
</tr>
</tbody>
</table>
**HiMedia Laboratories**

### Technical Data

**Clostridium sporogenes**  
*ATCC 11437*

- 50-100 luxuriant
- negative reaction, no colour change or red
- negative reaction, no colour change or red

### Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

### Reference


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