Aseptic Packing Line Medium

Aseptic Packing Line Medium is a fluid medium used in validating aseptic packing lines.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone</td>
<td>5.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>2.500</td>
</tr>
<tr>
<td>Sucrose</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Phenol red</td>
<td>0.005</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.2±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters**

**Directions**

Suspend 17.50 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes containing inverted Durhams tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle And Interpretation**

Aseptic Packing Line Medium is used in validating aseptic packing and filling lines. It is a basic medium for demonstrating growth by either acid or gas production.

Peptone and yeast extract provide basic nutrients. Sucrose is the carbohydrate source. Sodium chloride maintains osmotic balance. Phenol red is the pH indicator. Sucrose fermentation leads to the formation of acidic conditions which is detected by phenol red, observed as a colour change from red to yellow.

a. Dispense the reconstituted medium into packing line upstream of the sterilization process.

b. Incubate the filled packs at 30±2°C for upto 7 days.

Gas production is observed as trapped air bubbles in the Durhams tubes and acid production is visualized as a colour change of the medium to yellow. Growth is indicated as turbidity in the medium.

**Quality Control**

**Appearance**

Light yellow to light pink homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Orange red coloured clear solution in tubes

**Reaction**

Reaction of 1.75% w/v aqueous solution at 25°C. pH : 7.2±0.2

**pH**

7.10-7.50

**Cultural Response**

M1350: Cultural characteristics observed after an incubation at 30±2°C for 18-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Acid</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacillus cereus ATCC 14579 50-100</td>
<td>luxuriant</td>
<td>positive reaction, yellow colour</td>
<td>negative reaction</td>
<td></td>
</tr>
</tbody>
</table>
**Enterobacter aerogenes**
*ATCC 13048*
- 50-100 luxuriant
- Positive reaction, yellow colour

**Escherichia coli**
*ATCC 25922*
- 50-100 luxuriant
- Negative reaction, no colour change

**Staphylococcus aureus**
*ATCC 25923*
- 50-100 luxuriant
- Positive reaction, yellow colour

**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 label.