Non Selective medium used to subculture suspected *Xanthomonads* and *Clavibacters*

**Composition**: 

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Grams/Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeast extract</td>
<td>10.00</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>20.00</td>
</tr>
<tr>
<td>Glucose anhydrous</td>
<td>20.00</td>
</tr>
<tr>
<td>Agar</td>
<td>15.00</td>
</tr>
</tbody>
</table>

Final pH (at 25°C) 6.9

**Formula adjusted standard to suit the performance parameter**

**Direction:**

Suspend 65.0 grams in 1000 ml distilled water. Heat just to boiling. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50 °C. Mix well so as to distribute Calcium carbonate evenly and pour into sterile Petri plates.

*Note*: Due to the presence of Calcium carbonate the prepared medium forms opalescent gel with white precipitate

**Principle and Interpretation**

It is a non selective medium, suggested for subculturing *Xanthomonas* and *Clavibacter* after isolation on semi selective media. (1).

Yeast extract supplies nitrogenous compounds, vitamins and other essential nutrients to the organisms. Glucose serves as a carbohydrate source. Calcium carbonate acts as neutralizer.

**Quality Control:**
Cream to yellow coloured, homogeneous, free flowing powder.

**Gelling**
Firm, comparable with 1.5% Agar gel.

**Reaction:**
Reaction of 6.5% w/v aqueous solution is pH : 6.9 at 25°C.

**Colour and Clarity of prepared medium**
Yellow coloured, opalescent gel with white precipitate forms in Petri plates

**Cultural Response:**
Cultural characteristics observed after an incubation at 25-30°C for 5-6 days.
<table>
<thead>
<tr>
<th>Organism (ATCC)</th>
<th>Growth</th>
<th>Colour of the Colony</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Xanthomonas campestris</em> pv. vesicatoria</td>
<td>luxuriant</td>
<td>yellow</td>
</tr>
<tr>
<td><em>Clavibacter michiganesis</em> subsp <em>michiganesis</em></td>
<td>luxuriant</td>
<td>orange</td>
</tr>
</tbody>
</table>

**References:**


**Storage and Shelf-life:**

Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.