PSTA Enrichment Broth Base

PSTA Enrichment Broth Base is recommended for secondary enrichment of *Yersinia enterocolitica* from foods.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptic digest of animal tissue</td>
<td>1.000</td>
</tr>
<tr>
<td>Sucrose</td>
<td>1.000</td>
</tr>
<tr>
<td>Tris hydroxymethyl aminomethane</td>
<td>3.000</td>
</tr>
<tr>
<td>Brilliant green</td>
<td>0.0125</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>0.192</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>8.3±0.2</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 5.2 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 to 45-50°C and aseptically add Ampicillin to a final concentration 0.005 gm per litre. Mix well and dispense as desired.

**Principle And Interpretation**

*Yersinia enterocolitica* are ubiquitous, being isolated frequently from soil, water, animals, and a variety of foods. They comprise a biochemically heterogeneous group that can grow at refrigeration temperatures. *Y. enterocolitica* has been detected in environmental and food sources, such as ponds, lakes, meats, ice cream, and milk. *Yersinia* species have the ability to grow at 4°C (1). Also they exhibit tolerance to dilute alkali (2, 3). PSTA Enrichment Broth Base formulated in accordance with APHA (4), is recommended for secondary or selective enrichment of *Y. enterocolitica*.

Secondary enrichment following primary enrichment is advantageous as it imparts higher selectivity, thereby increasing the chance of recovery or isolation of target organism.

Peptic digest of animal tissue in the medium provides nitrogen, vitamins and minerals necessary to support bacterial growth. Sucrose is the carbohydrate source. Brilliant green and sodium azide inhibits the growth of gram-negative organisms. About 25 grams of food sample is added to 225 ml of PSB Broth Base (M941) and incubated at 4°C for 14-28 days. 1 ml of this primary enrichment is inoculated in 100 ml of PSTA Enrichment Broth Base (M940) and incubated at 28°C for 48 hours. The secondary enrichment is then streaked on selective media such as SS Agar (M108), Yersinia Selective Agar Base (M843).

**Quality Control**

**Appearance**

Light yellow to greenish yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Green coloured clear to slightly opalescent solution

**Reaction**

Reaction of 0.52% w/v aqueous solution at 25°C. pH : 8.3±0.2

**pH**

8.10-8.50

**Cultural Response**

M940: Cultural characteristics observed after an incubation at 28°C for 48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Yersinia enterocolitica</em></td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td>ATCC 27729</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Storage and Shelf Life**

Please refer disclaimer Overleaf.
Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

**Reference**


**Disclaimer:**

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