Buffered Peptone Water

Buffered Peptone Water is used for pre-enrichment of injured *Salmonella* species from foods prior to selective enrichment and isolation. It is recommended by BIS committee under the specifications IS:5887(Part III)-1999.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptic digest of animal tissue</td>
<td>10.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Disodium phosphate.12H2O</td>
<td>9.000</td>
</tr>
<tr>
<td>Monopotassium phosphate</td>
<td>1.500</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.0±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 20.07 grams of dehydrated medium in 1000 ml distilled water. Dispense in 50 ml amounts. Sterilize by autoclaving at 15 lbs pressure (121°C) for 20 minutes.

**Principle And Interpretation**

Edel and Kampelmacher (1) noted that sublethal injury to Salmonellae may occur in many food preservation processes. Enriching injured cells in Lactose broth (M1003S) (pH 6.9) may be further detrimental to their recovery (2). Pre-enrichment in Buffered Peptone Water at 35°C for 18-24 hours results in repair of injured cells (3). Recently ISO committee has also recommended this pre-enrichment medium for the detection of *Enterobacteriaceae* (4). Present formulation is recommended by BIS as a non-selective pre-enrichment medium as well as a diluent for detection of *Salmonella* (5).

Inoculate the test sample in Buffered peptone water and incubate at 35 - 37°C for 16 - 20 hours. Transfer the culture to selective enrichment media, Modified Rappaport Vassiliadis Medium (M1137I) and Fluid Selenite Cystine Broth (M025I). Incubate M1137I at 42°C and M025I at 35 - 37°C for 24 hours. Subculture on selective plating media. Examine the plates for colonies of *Salmonella* species.

**Quality Control**

**Appearance**

Cream to yellow coloured homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Light yellow coloured clear solution without any precipitate.

**Reaction**

Reaction of 2.0% w/v aqueous solution at 25°C. pH : 7.0±0.2

**pH**

6.80-7.20

**Cultural Response**

M614S: Cultural characteristics observed after an incubation at 35-37°C for 18 - 24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Salmonella Typhimurium</em> ATCC 14028</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Salmonella Typhi</em> ATCC 19430</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Salmonella Enteritidis</em> ATCC 13076</td>
<td>50-100</td>
<td>luxuriant</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**

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.