Buffered Glycerol Saline Base

Buffered Glycerol Saline Base with added glycerol is used in the collection and transportation of faecal specimens.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride</td>
<td>4.200</td>
</tr>
<tr>
<td>Dipotassium phosphate</td>
<td>3.100</td>
</tr>
<tr>
<td>Monopotassium phosphate</td>
<td>1.000</td>
</tr>
<tr>
<td>Phenol red</td>
<td>0.003</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 8.3 grams in 700 ml distilled water. Add 300 ml of glycerol. Heat if necessary to dissolve the medium completely. Mix well and dispense in screw capped tubes or suitable containers. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle And Interpretation**

Specimens which cannot be processed immediately after collection, or those which need to be sent to a distant reference laboratory, should be properly preserved to maintain the viability of the specimens. In general, most specimens should be processed in the laboratory within 1 to 2 hours after collection. Buffered Glycerol Saline Base was first reported by Teague and Clurman (1) and later modified by Sachs (2). Buffered Glycerol Saline is used for collection and transportation of faecal specimens (3).

The medium contains sodium chloride, which provides essential ions. Dipotassium and monopotassium phosphate provides buffering to the medium. Phosphate buffers along with glycerol are used to recover pathogenic bacteria (6). Prepared medium should have a light pink colour indicating slightly alkaline pH. If the medium turns yellow i.e. acidic then it should be discarded because of unfavorable effect on dysentery bacilli if they are present in the specimens (5).

**Quality Control**

**Appearance**
Light yellow to pink homogeneous free flowing powder

**Colour and Clarity of prepared medium**
Light pink coloured, clear solution without any precipitate

**Reaction**
Reaction of aqueous solution (0.83 gms in 70 ml distilled water) at 25°C. pH : 7.2±0.2

**pH**
7.00-7.40

**Cultural Response**
M204: Cultural characteristics observed with added Glycerol(30 ml), after an incubation at 35-37°C for 18-24 hours.

**Organism**

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Neisseria meningitidis</em> ATCC13090</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> ATCC 25923</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td><em>Staphylococcus epidermidis</em> ATCC 12228</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td><em>Streptococcus pneumoniae</em> ATCC 6303</td>
<td>good-luxuriant</td>
</tr>
</tbody>
</table>
Streptococcus pyogenes  
ATCC 19615

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 the label.

Reference