Buffered Skim Milk (Twin Pack)

Buffered skim milk is recommended for the cultivation and differentiation of microorganisms based on coagulation and proteolysis of casein.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A</td>
<td></td>
</tr>
<tr>
<td>Skim milk powder</td>
<td>100.000</td>
</tr>
<tr>
<td>Part B</td>
<td></td>
</tr>
<tr>
<td>Disodium hydrogen orthophosphate (Na2HPO4)</td>
<td>1.300</td>
</tr>
<tr>
<td>Potassium dihydrogen orthophosphate (KH2PO4)</td>
<td>0.800</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>6.7±0.1</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 100 grams of skim milk (Part A) in a little amount of distilled water to make a smooth paste. Gradually add more distilled water to make a final volume of 1000 ml. To this add 2.1 grams of part B and mix well to dissolve the medium completely. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle And Interpretation**

Skim Milk is used for the demonstration of coagulation and proteolysis of casein (1). The medium is used for cultivation and enumeration of microorganisms encountered in dairy industry. Skim Milk is sometimes used as a complete medium or as an ingredient in other media used for propagation of organisms occurring in milk products like *Mycobacterium tuberculosis*, *Corynebacterium diphtheriae* etc. Proteolytic bacteria hydrolyze casein to form soluble nitrogenous compounds indicated as clear zone surrounding the colonies on Agar media and shows separation of solids in liquid media.

Skim milk serves as a good source of lactose, casein and other nutrients for the growth of microorganisms while phosphates buffer the medium.

**Quality Control**

**Appearance**

Part A : White to cream homogeneous free flowing powder Part B : White to cream homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Off white coloured opaque solution forms in tubes.

**Reaction**

Reaction of 10.2 %w/v aqueous solution of Part B at 25°C. pH : 6.7±0.1

**pH**

6.60-6.80

**Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
<th>Proteolytic activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escherichia coli ATCC 25922</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=50%</td>
<td>Negative</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa ATCC 27853</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=50%</td>
<td>Positive</td>
</tr>
<tr>
<td>Bacillus subtilis ATCC 6633</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=50%</td>
<td>Positive</td>
</tr>
</tbody>
</table>
HiMedia Laboratories

Technical Data

Proteus mirabilis ATCC 10975
50-100 luxuriant >=50% Positive

Enterococcus faecalis ATCC 50-100
29212 luxuriant >=50% Negative

Serratia marcescens ATCC 8100
50-100 luxuriant >=50% Positive

Clostridium perfringens ATCC 12924
50-100 luxuriant >=50% Positive

Storage and Shelf Life
Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.

Reference

Revision : 2 / 2015