KF Streptococcus Broth Base w/ BCP

KF Streptococcus Broth Base w/ BCP is recommended for detection and enumeration of faecal Streptococci.

**Composition**

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptic digest of animal tissue</td>
<td>5.000</td>
</tr>
<tr>
<td>Casein enzymic hydrolysate</td>
<td>5.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>10.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium glycerophosphate</td>
<td>10.000</td>
</tr>
<tr>
<td>Maltose</td>
<td>20.000</td>
</tr>
<tr>
<td>Lactose</td>
<td>1.000</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>0.400</td>
</tr>
<tr>
<td>Bromocresol purple</td>
<td>0.015</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 56.41 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. DO NOT AUTOCLAVE. Overheating will lower the pH and render the medium less productive. Cool to 50°C and aseptically add 10 ml of 1% 2, 3, 5-Triphenyl Tetrazolium Chloride (TTC) to sterile medium.

**Principle And Interpretation**

Streptococci are spherical, gram-positive bacteria and form a part of the normal commensal flora of the mouth, skin, intestine, upper respiratory tract of humans. Streptococci found in the faeces form the faecal Streptococci and constitute of Streptococci with group D Lancefield antigens. The types include Streptococcus faecalis, Streptococcus faecium, Streptococcus bovis and Streptococcus duran. They are low-grade pathogens and rarely cause disease. However, they may cause urinary tract infection in catheterized patients; mixed abdominal wound infections following gut surgery; and endocarditis on abnormal valves. Kenner - Faecal (KF) Medium was developed by Kenner et al (1, 2) for detecting Streptococci in water and food materials.

Peptic digest of animal tissue and casein enzymic hydrolysate together with yeast extract provide nitrogen, carbon, sulphur, amino acids, vitamins and trace ingredients to the faecal Streptococci. Lactose and maltose are the fermentable carbohydrates and therefore serve as energy sources. Sodium azide is a selective agent, which hampers the growth of gram-negative bacteria. 2, 3, 5-Triphenyl Tetrazolium Chloride is reduced to insoluble formazan by actively metabolizing cells, resulting in the formation of pink or red colour. Bacteria resistant to azide, utilize lactose and / or maltose. The acidity so produced changes the colour of the indicator dyes to yellow. Bacterial cells reduce TTC to insoluble formazan, resulting in the formation of pink to red colour.

**Quality Control**

**Appearance**
Cream to greyish yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**
Light purple coloured, clear solution in tubes

**Reaction**
Reaction of 5.64% w/v aqueous solution at 25°C. pH : 7.2±0.2

**pH**
7.00-7.40

**Cultural Response**
M1021: Cultural characteristics observed after an incubation at 35-37°C for 48 - 72 hours.
**Organism** | **Inoculum (CFU)** | **Growth**  
--- | --- | ---  
**Cultural Response**  
*Escherichia coli ATCC 25922* | $\geq 10^3$ | inhibited  
*Enterobacter aerogenes ATCC 13048* | $\geq 10^3$ | inhibited  
*Enterococcus faecalis ATCC 50-100 29212* | 50-100 | good-luxuriant  

**Storage and Shelf Life**
Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

**Reference**

Disclaimer:
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