Coliform Broth w/ SLS

Coliform Broth w/ SLS is used as a medium for detection of *E. coli* and other *Enterobacteriaceae* in water samples.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special peptone</td>
<td>3.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Dipotassium hydrogen phosphate</td>
<td>3.000</td>
</tr>
<tr>
<td>Potassium dihydrogen phosphate</td>
<td>1.700</td>
</tr>
<tr>
<td>Sodium pyruvate</td>
<td>1.000</td>
</tr>
<tr>
<td>L-Tryptophan</td>
<td>1.000</td>
</tr>
<tr>
<td>Sodium lauryl sulphate</td>
<td>0.100</td>
</tr>
<tr>
<td>Chromogenic mixture</td>
<td>0.300</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>6.8±0.2</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 15.10 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. Mix well and dispense as desired.

**Principle And Interpretation**

Coliform Broth w/ SLS is a selective medium recommended for the simultaneous detection of *Escherichia coli* and total coliforms in water and food samples (4).

Special peptone supplies the essential growth nutrients to the organisms. The phosphates in the medium buffers the medium. Sodium chloride maintains the osmotic balance. Sodium lauryl sulphate inhibits the gram positive organisms. L-Tryptophan in the medium improves the indole reaction. The enzyme β-glucuronidase produced by *E. coli* cleaves X-glucuronide thus imparting blue colour to the medium (1,2,3). Formation of cherry red colour after addition of few drops (0.5ml) of Kovac's reagent (R008) to the medium indicates the presence of *E. coli*.

**Quality Control**

**Appearance**

Cream to yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Cream, clear to slightly opalescent solution, may have slight precipitate.

**Reaction**

Reaction of 1.51% w/v aqueous solution at 25°C. pH : 6.8±0.2

**pH**

6.60-7.00

**Cultural Response**

M1826: 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>
<th>Colour of Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Citrobacter freundii ATCC 8090</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>colourless</td>
</tr>
<tr>
<td><em>Escherichia coli ATCC 25922</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>blue</td>
</tr>
<tr>
<td><em>Escherichia coli ATCC 35218</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>blue</td>
</tr>
</tbody>
</table>
**Technical Data**

*Enterococcus faecalis ATCC* 29212

>=10³ inhibited -

*Klebsiella pneumoniae ATCC 13883*

50-100 luxuriant colourless

*Salmonella Enteritidis ATCC* 50-100 good colourless

*Shigella flexneri ATCC 12022*

50-100 luxuriant colourless

*Staphylococcus aureus ATCC 25923*

>=10³ inhibited -

*Staphylococcus aureus ATCC 6538*

>=10³ inhibited -

**Storage and Shelf Life**

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

**Reference**


Revision: 1 / 2015

**Disclaimer:**

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