Fluid Lactose Medium is used for the detection of coliform bacteria in water, pharmaceutical, foods, dairy products in accordance to United States Pharmacopoeia, 2008.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pancreatic digest of gelatin</td>
<td>3.000</td>
</tr>
<tr>
<td>Beef extract</td>
<td>5.000</td>
</tr>
<tr>
<td>Lactose</td>
<td>5.000</td>
</tr>
<tr>
<td>pH after sterilization (at 25°C)</td>
<td>6.9±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 13 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. For larger inocula (10 ml or more), concentrated medium may be prepared to account for medium dilution by the inoculum. Dispense in tubes containing inverted fermentation vial (Durhams tube) as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle And Interpretation**

Fluid Lactose Medium is recommended by APHA and United States Pharmacopoeia (1) in the performance and confirmation of the presumptive test for coliform bacteria in water(2), food(3) and milk (4). This medium can be used as an alternate to Lauryl Sulphate Broth in the presumptive test of the MPN of standard coliforms. This medium is also used for pre-enrichment of *Salmonella* for its detection in pharmaceutical raw materials.

Pancreatic digest of gelatin and beef extract supply essential nutrients to the organisms. Lactose is a fermentable carbohydrate for the coliforms. Tubes of Fluid Lactose Medium are inoculated with dilutions of water or milk, etc. under test, and incubated at 35-37°C and examined for gas formation after 24 and 48 hours.

Members of the coliform group are defined as aerobic and facultative anaerobic gram-negative and non-sporing bacilli which ferment lactose with gas formation within 48 hours at 35°C. In testing dairy products, Fluid Lactose Medium is used only in the completed test (3). Large water samples may require double strength Fluid Lactose Medium to minimize the final volume.

**Quality Control**

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

**Colour and clarity of prepared medium**
Light amber coloured clear solution in tubes

**pH**
6.70-7.10

**Growth Promotion Test**
As per United States Pharmacopoeia.

**Cultural Response**
Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

Please refer disclaimer Overleaf.
Enterobacter aerogenes ATCC 13048 50-100 luxuriant Positive reaction
Enterococcus faecalis ATCC 50-100 luxuriant Negative reaction
Pseudomonas aeruginosa ATCC 9027 50-100 luxuriant Negative reaction
Escherichia coli ATCC 8739 50-100 luxuriant Positive reaction

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