M-FC Medium (Without Membrane Filter)

For detection and enumeration of faecal coliforms at higher temperature (44°C).

**Composition**
Proprietary

**Directions**
The test sample should be filtered through a sterile membrane filter having pore size of 0.22 / 0.45µ. Rehydrate the nutrient pad with 2.0-2.5 ml sterile distilled / purified water. After filtration, remove the membrane filter aseptically using sterile forceps. Place the membrane filter on rehydrated nutrient pad. Incubate the inoculated nutrient. Interpret the results qualitatively by observing the presence or absence of growth and quantitatively by counting the number of colonies on the surface of the membrane filter and calculating CFU/ml.

**Principle And Interpretation**
Field of Application: Water (Standard TNV 75, 7835, 1999), food. DriFilter Membrane Nutrient Pad Medium is ready to use sterile culture media in the form of a 50 mm biological inert absorbent pads impregnated with M-FC medium, then dried and sterilized in 55 mm petri plate. They eliminate the need of laborious media preparation and autoclaving procedures. The nutrient pads are to be just rewetted with sterile distilled water and are ready to use. Use of nutrient pads allows larger sample volumes to be tested at a time. Interpretation of results is directly by counting the CFUs and also quantifies the microbial load present in the sample. M-FC Medium, designed by Geldreich et al (2) is used for the detection and enumeration of faecal coliforms using the membrane filter technique. This medium is based on the property of faecal coliforms to grow at 44-45°C (1). M-FC Medium is recommended by APHA (3) and by various other standards for detection of faecal coliforms (4-6). APHA recommends the membrane filtration procedure and delayed incubation for faecal coliforms. Proteose peptone, tryptose and yeast extract provide necessary nutrients for the growth of faecal coliforms. Lactose is the carbon source as well as fermentable carbohydrate in the medium. Bile salts inhibit the growth of contaminating gram-positive microorganisms. Aniline blue is a triphenyl methane dye which suppresses the growth of many gram positive microorganisms. Aniline blue along with rosolic acid forms the indicator system of the medium. Membrane filters, through which water sample is passed, are aseptically placed onto M-FC Medium plates. If total coliforms are to be estimated, incubation is carried out at 35-37°C whereas if faecal coliform count is to be stimated, incubation is done at 44-45°C. Coliforms will form blue colonies whereas non-coliforms will form grey coloured colonies on M-FC Medium.

**Quality Control**
**Appearance**
Dry filter membrane pad of 50mm diameter

**Colour**
Light purple - greyish coloured nutrient pad

**Sterility test**
Passes release criteria

**Cultural response**
Cultural characteristics observed after incubation at 35 - 37°C for 22 - 24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth</th>
<th>Colour of colony</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Escherichia coli</em> ATCC 25922</td>
<td>Luxuriant</td>
<td>Light blue</td>
</tr>
<tr>
<td><em>Shigella flexneri</em> ATCC 12022</td>
<td>Luxuriant</td>
<td>Pinkish</td>
</tr>
</tbody>
</table>
Enterococcus faecalis ATCC 29212
S. serotype Typhimurium
ATCC14028

Storage and Shelf Life
Store between 10-30°C. Use before expiry date on the label.

Reference

Disclaimer:

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.