



Coliform Medium w/ SLS (w/ Sterile Membrane Filter)

MF026F

For detection and enumeration of total coliforms and *E. coli* based on chromogenic differentiation.

Composition**

Directions

The test sample should be filtered through a sterile membrane filter having pore size of 0.22 μ / 0.45 μ . 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: These are ready to use sterile culture media in the form of a 50 mm biological inert absorbent pads impregnated with standard culture 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 for use. Use of nutrient pads allows larger sample volumes to be tested at a time, thereby helping time conservation. Results can be interpreted directly by counting the CFUs, therefore one can quantify the microbial load present in the sample. MF026, HiCrome Coliform Agar w/SLS has chromogenic mixture and Sodium lauryl sulphate (SLS). Sodium lauryl sulphate (SLS) inhibits gram-positive organisms. The enzyme -D-galactosidase produced by coliforms cleaves one chromogen, resulting in purple colouration of coliform colonies. The enzyme -D-glucuronidase produced by *Escherichia coli*, cleaves another chromogen, X-glucuronide. *Escherichia coli* forms blue coloured colonies due to cleavage of both the chromogens. The addition of L-Tryptophan improves the indole reaction, there by increasing detection reliability in combination with the two chromogens. To confirm *Escherichia coli*, add a drop of Kovac's reagent on the dark-blue to violet colony. Formation of cherry-red colour indicates the positive reaction.

Quality Control

Appearance

Dry filter membrane pad of 50mm diameter

Colour

Pale to colourless nutrient pad

Cultural response

Cultural characteristics observed after incubation at 35-37°C for 18-24 hours (48 hours if necessary)

Sterility test

Passes release criteria

Cultural Response

Organism	Growth	Colour of colony
Cultural response <i>Escherichia coli</i> ATCC 25922	Luxuriant	Dark blue - violet
<i>Citrobacter freundii</i> ATCC 8090	Good-luxuriant	Salmon to red
<i>Klebsiella pneumoniae</i> ATCC 13883	Good-luxuriant	Pink to red
<i>Enterococcus faecalis</i> ATCC 29212	Inhibited	
<i>Enterobacter cloacae</i> ATCC 13047	Good-luxuriant	Salmon to red

Storage and Shelf Life

Store between 2-8°C. Use before expiry date on the label.

Reference

1. Frampton E. W., Restaino L. and Blaszkowski N., 1988, J. Food Prot., 51:402. 2. Kilian M. and Bülow P., 1976, Acta. Pathol. Microbiol. Scand., Sect. B, 84:245. 3. LeMinor L. and Hamida F., 1962, Ann. Inst. Pasteur (Paris), 102:267. 4. Manafi M. and Kneifel W., 1989, Zentralbl. Hyg., 189:225.

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