OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

M-FC Agar Base

Principle

M-FC agar base is formulated by Geldreich (1965) for the detection and enumeration of fecal coliforms using the membrane filtration technique. It is recommended by APHA (2015) for the enumeration of fecal coliforms by the membrane filtration and delayed incubation for fecal coliforms at higher temperature (4445°C. The media is composed of tryptose, proteose peptone, yeast extract, lactose, bile salt mixture, sodium chloride, aniline blue and agar. Tryptose, peptone and yeast extract as a source of carbon, nitrogen, vitamins and minerals. Lactose and sucrose are fermentable carbohydrates. 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 and help in detection of coliforms. The water sample is passed through the membrane filter and aseptically placed onto M-FC Agar base plates. If total coliforms are to be estimated, incubation is carried out at 35-37°C whereas if fecal coliform count is to be estimated, incubation is done at 44-45°C. Coliforms will form blue colonies whereas non-coliforms will form gray colored colonies on M-FC Agar Base.

Use: For detection and enumeration of faecal coliforms by membrane filter technique at higher temp.

Contents*

Ingredients	Gram/Litre
Tryptose	10.000
Proteose Peptone	5.000
Yeast extract	3.000
Lactose	12.500
Bile salt mixture	1.500
Sodium chloride	5.000
Aniline blue	0.100
Agar	15.000
pH at 25˚C	7.4 ±0.2

*** Formula adjusted for optimum performance and parameters**

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Directions: Dissolve 52.10 grams in 1000 ml distilled water containing 10 ml of 1% rosalic acid. Boil to dissolve the medium completely. Do not autoclave, cool it to 42-45 °C and distribute aseptically in sterile petri plates. Ensure complete solidification and place membrane filter aseptically.

Specimens' types analyzed

The water samples, soil samples, food and dairy samples, pharmaceutical samples, clinical samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Greyish yellow colored free flowing, homogeneous powder**
Reaction of 5.21% solution	**7.4 ±0.2 at 25 ˚C**
pH	**7.20- 7.60**
Gelling	**Firm comparable with 1.5% agar gel**
Color and clarity of ready medium	**After Addition of 1% Rosolic Acid: Red colored slightly opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

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Different Microbial Response
Cultural characteristics observed with added Rosolic Acid solution after an incubation at different temperatures for 20-24 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth at 35-37ºC	Colony Color on membrane filter	Growth at 44-45ºC	Colony Color on membrane filter
Escherichia coli	8739	Luxuriant	Light blue	Luxuriant	Light blue
Salmonella typhimurium	14028	Luxuriant	Pinkish	Inhibited	--
Shigella flexneri	9199	Luxuriant	Pinkish	Inhibited	--
Enterococcus faecalis	29212	Inhibited	--	Inhibited	--

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.
Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. **Baird R.B., Eaton A.D., and Rice E.W., (Eds.), (2015), Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.**
2. **Geldreich E. E., Clark H. F., Huff E. E. and Bert M., (1965), J. Am. Water Works Assoc., 57:208.**
3. **Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.**

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