

# mFC (membrane Fecal Coliforms) Agar



Medium used for the detection and enumeration of fecal coliforms from water by membrane filter technique at higher temperature.

## • CONTENTS (Liter)

Tryptose	10.0 g
Proteose Peptone No.3	5.0 g
Yeast Extract	3.0 g
Lactose	12.5 g
Sodium Chloride	5.0 g
Bile Salts No.3	1.5 g
Aniline Blue	0.1 g
Agar	15.0 g

Final pH = 7.4 ± 0.2 at 25°C.

## • PROCEDURE

Suspend 52.1 G of powder in 1 L of distilled or deionized water. Aseptically add 2 vials of Rosolic Acid supplement (MB-R1829). Heat to boiling until completely dissolved. DO NOT AUTOCLAVE. Cool to 45-50°C in water bath. Mix well. Dispense in petri dishes.

### Rosolic Acid supplement

1 vial content (each vial is sufficient for 500mL of medium)

Rosolic Acid	0.05 g
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## • INTERPRETATION

mFC (Membrane Fecal Coliforms) Agar is a selective medium used for the detection and enumeration of fecal coliforms from water by the membrane filter technic. Tryptose, proteose peptone No.3 and yeast extract provide essential sources of nitrogen and other growth nutrients. Lactose is a carbohydrate. Sodium chloride maintains the osmotic balance. Bile salts No.3 inhibits gram-positive organisms. Aniline blue and rosolic acid combine and indicate the ability of fecal coliforms to ferment lactose to acid that causes a pH change in the medium. As a result, fecal coliforms cultivate with blue colonies and all other gram-negative bacteria cultivate with gray or creamy colonies. Agar is the solidifying agent.

## • TECHNIC

Inoculate the plates with spreading the specimen on surface of medium using a sterile loop. Incubate at 44.5 ± 0.5°C for 24 ± 2 hours. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: greyish-beige.

### Prepared medium

Appearance: clear, slightly opalescent.

Color: red.

Incubation conditions: : 44.5 ± 0.5°C / 24 ± 2 hours

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics
<i>Escherichia coli</i>	25922	50-100	good	dark blue colonies (≤24h) gray colonies (>24h)
<i>Salmonella typhimurium</i>	14028	50-100	good	yellowish-gray colonies
<i>Shigella flexneri</i>	12022	50-100	good	yellowish-gray colonies
<i>Klebsiella pneumoniae</i>	27736	50-100	good	creamy colonies (≤24h) yellowish-brown colonies (>24h)
<i>Enterococcus faecalis</i>	29212	≥10 <sup>3</sup>	inhibited	-
<i>Staphylococcus aureus</i>	25923	≥10 <sup>3</sup>	inhibited	-

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8°C.

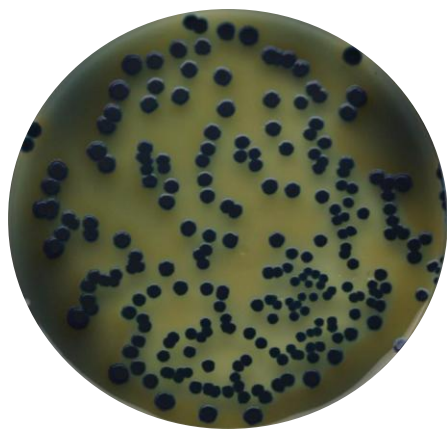
## • REFERENCES

1. APHA (1985). Standard Methods of the Examination of Water and Wastewater, 16th Edition.
2. Gildreich, E.E., H.F. Clark, C.B. Huff, and L.C. Best (1965). J. Am. Waters Works Ass. 57, 208.

## • PACKAGE

Cat. No : MB-F1412 mFC (Membrane Fecal Coliforms) Agar	500 G
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## • MICROBIAL CULTURE IMAGES



*Escherichia coli* ATCC 25922 (100 CFU)



*Shigella flexneri* ATCC 12022



*Enterococcus faecalis* ATCC 29212

Incubation conditions : 44.5 ± 0.5°C 24 ± 2h