TM 178 - M-FC AGAR BASE

INTENDED USE

For detection and enumeration of faecal coliforms by membrane filter technique at higher temp. (44.5°C).

PRODUCT SUMMARY AND EXPLANATION

M-FC Agar Base, designed by Geldreich et al 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. M-FC Agar Base is recommended by APHA and by various other standards for detection of faecal coliforms. APHA recommends the membrane filtration procedure and delayed incubation for faecal coliforms.

Membrane filters, through which water sample is passed are 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 faecal coliform count is to be estimated, incubation is done at 44-45°C. Coliforms will form blue colonies whereas non-coliforms will form gray coloured colonies on M-FC Agar Base.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	10.000
Proteose peptone	5.000
Yeast extract	3.000
Lactose	12.500
Bile salts mixture	1.500
Sodium chloride	5.000
Aniline blue	0.100
Agar	15.000

PRINCIPLE

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.

INSTRUCTION FOR USE

- Dissolve 52.1 grams in 1000 ml purified / distilled water containing 10 ml 1% Rosolic Acid.
- Heat to boiling to dissolve the medium completely. Do not autoclave.
- Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to greyish yellow, may have slight green or blue tinge homogeneous free flowing powder

Appearance of prepared medium : After Addition of 1% Rosolic Acid: Red coloured slightly opalescent gel forms in Petri plates

pH (at 25°C) : 7.4±0.2

INTERPRETATION

Cultural characteristics observed with added 1% Rosolic Acid after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth at 35-37°C	Growth at 45.5°C	Recovery at 35-37°C	Recovery at 45.5°C	Color of the colony(on membrane filter)	Incubation Temperature	Incubation Temperature	Incubation Period
Enterococcus faecalis	29212	>=10^4	inhibited	inhibited	0%	0%	-	35-37°C	45.5°C	22-24 Hours
Escherichia coli	25922	50-100	luxuriant	luxuriant	>=70%	>=70%	light blue	35-37°C	45.5°C	22-24 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	inhibited	>=70%	0%	pinkish	35-37°C	45.5°C	22-24 Hours
Shigella flexneri	12022	50-100	luxuriant	inhibited	>=70%	0%	pinkish	35-37°C	45.5°C	22-24 Hours

PACKAGING:
In pack size of 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
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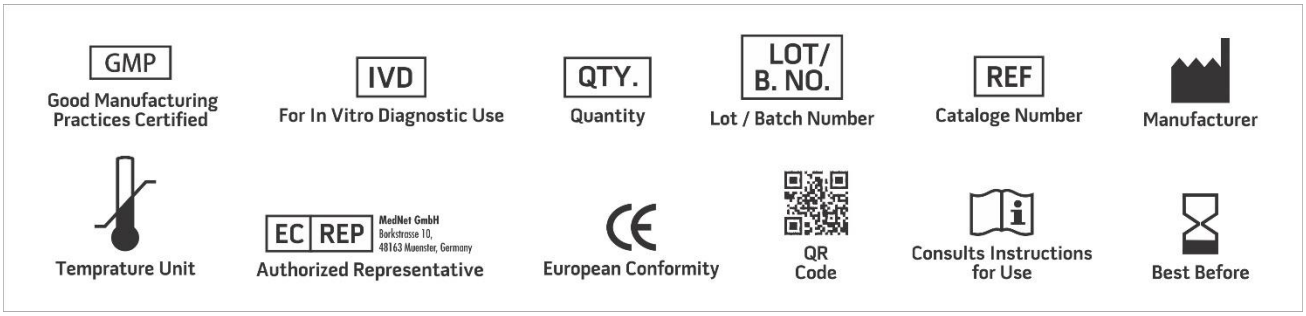

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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