

## TM 179 - M-FC AGAR BASE MODIFIED

### INTENDED USE

For detection & enumeration of *Klebsiella* in water by membrane filter technique.

### PRODUCT SUMMARY AND EXPLANATION

M-FC Agar Base, modified is used for the enumeration of *Klebsiella* using membrane filter technique. *Klebsiella* are widely distributed in nature, occurring in soil, water, grains, vegetation etc. Wood pulp, paper mills, textile finishing plants and sugarcane processing operations contain large numbers of *Klebsiella* in their effluents and are often the predominant coliform in such effluents. M-FC Agar, modified is formulated as per APHA for enumeration of *Klebsiella*. M-FC Agar is modified by replacing lactose by inositol and adding Carbenicillin.

### COMPOSITION

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

### PRINCIPLE

Proteose peptone, tryptose and yeast extract in the medium provide necessary nutrients for the growth of faecal coliforms. Inositol is the fermentable carbohydrate and the carbon source in the medium. Bile salts mixture inhibits the growth of contaminating gram-positive microorganisms. Aniline blue is a triphenyl methane dye, which suppresses the growth of many gram-positive microorganisms. Also, along with rosolic acid it forms the indicator system in the medium. Carbenicillin inhibits accompanying coliforms and other bacteria and helps in selective isolation of *Klebsiella* species. Sample volume is selected to yield 20 to 60 *Klebsiella* colonies per membrane. This membrane filter is aseptically placed on agar surface. Occasional false positive results may be occurred due to *Enterobacter* species. *Klebsiella* colonies appear deep blue to blue grey due to aniline blue present in the medium. *Klebsiella* colonies will form blue or bluish gray coloured. Presumptive colonies should be further confirmed by performing the biochemical tests.

### INSTRUCTION FOR USE

- Dissolve 49.6 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely. Do not autoclave.
- Add 10 ml of 1% Rosolic Acid.
- Cool below 45°C and add 50 mg Carbenicillin.
- Mix well and pour into sterile Petri plates.

### QUALITY CONTROL SPECIFICATIONS



**Appearance of Powder** : Light yellow to greyish yellow homogeneous free flowing powder  
**Appearance of prepared medium** : After Addition of 1% Rosolic Acid: Red coloured clear to 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	Recovery	Colour of colony (on membrane filter)	Incubation Temperature	Incubation Period
<i>Enterobacter aerogenes</i>	13048	50-100	good-luxuriant	>=50 %	pink or occasionally pale yellow	35-37°C	18-24 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	good-luxuriant	>=50 %	deep blue to blue grey	35-37°C	18-24 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**

- Eaton A. D., Clesceri L. S. and Greenberg A. W., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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

\*For Lab Use Only  
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