M-FC Agar Modified For Klebsiella

Intended Use
M-FC Agar, Modified is used for rapid enumeration of *Klebsiella* using membrane filter technique.

Summary
M-FC Agar, 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 in 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.

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.

Formula*

Ingredients	**g/L**
Tryptose	10.0
Proteose Peptone	5.0
Yeast Extract	3.0
Sodium Chloride	5.0
Inositol	10.0
Bile Salts Mixture	1.5
Aniline Blue	0.1
Agar	15.0
Final pH (at 25°C)	7.4 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling
Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 49.60 g of the powder in 1000 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely. DO NOT AUTOCLAVE.
3. Add 10 mL of 1% Rosolic Acid.
4. Cool below 45°C and add 50 mg Carbenicillin.
5. Mix well and pour into sterile petriplates.

Quality Control

Dehydrated Appearance: Bluish grey coloured, homogenous free flowing powder.
Prepared Appearance: With addition of 1% Rosolic Acid: Red coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed with added 1% Rosolic Acid after an incubation at 35°C-37°C for 18-24 hours.

Organism (ATCC)	Growth	Colour of Colony
Klebsiella aerogenes (13048)	Good	Pink
Klebsiella pneumoniae (13883)	Good	Deep blue

Interpretation of Results

1. The membrane filter is aseptically placed on agar surface.
2. Occasional false positive results may be occurred due to *Enterobacter* species.
3. *Klebsiella* colonies appear deep blue to blue grey due to aniline blue present in the medium.
4. *Klebsiella* colonies will form blue or bluish gray coloured.
5. Presumptive colonies should be further confirmed by performing the biochemical tests.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. 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.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201130410500	Dehydrated Culture Media	500 g