Technical Information

M-FC Agar Base, Modified

Product Code: DM 2124

Application: - M-FC Agar Base, Modified is recommended for rapid enumeration of *Klebsiella* using membrane filter technique.

Composition**

Ingredients	Gms / Litre
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
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

M-FC Agar Base, Modified is recommended 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 (1) for enumeration of *Klebsiella*. M-FC Agar is modified by replacing lactose by inositol and adding Carbenicillin.

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 prevents 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. *lebsiella* 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.

Methodology

Suspend 49.6 grams of dehydrated powder media in 1000 ml distilled water. Mix thoroughly & heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Add 10 ml of 1% Rosolic Acid (MS 2058). Cool below 45°C and add 50 mg Carbenicillin. Shake well before pour into sterile Petri plates.

Quality Control

Appearance

Light yellow to greyish yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity
After Addition of 1% Rosolic Acid: Red coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.96% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH Range
7.20-7.60

Cultural Response
DM 2124: Cultural characteristics observed with added 1% Rosolic Acid (MS 2058) a fter an incubation at 35 - 37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Colour of colony (on membrane filter)
Enterobacter aerogenes ATCC 13048	50-100	good-luxuriant	pink or occasionally pale yellow
Klebsiella pneumoniae ATCC 13883	50-100	good-luxuriant	deep blue to blue grey

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.
Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

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.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
- Central Drug House Pvt. Ltd. reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents. Do not use the products if it fails to meet specifications for identity and performance parameters.