

## Technical Information

### M-FC MiVeg Agar Base

#### Product Code : VM2122

**Application:-** M-FC MiVeg Agar Base is recommended for the detection and enumeration of faecal coliforms using membrane filter technique at higher temperature.

#### Composition

Ingredients	Gms / Litre
MiVeg hydrolysate No. 1	10.00
MiVeg peptone No. 3	5.00
Yeast extract	3.00
Lactose	12.50
Synthetic detergent No. 1	1.50
Sodium chloride	5.00
Aniline blue	0.10
Agar	15.00
Final pH ( at 25°C)	7.4±0.2

\*\* Formula adjusted, standardized to suit performance parameters.

#### Principle & Interpretation

M-FC MiVeg Agar Base is prepared by using vegetable peptones instead of animal based peptones thereby making the medium free from BSE/TSE risks. This medium is the modifications of M-FC Agar Base which was designed by Geldreich, Clark, Huff and Bert (1) and recommended by APHA (2) for the detection and enumeration of faecal coliforms using membrane filter technique. Faecal coliforms are differentiated from coliforms from environmental sources by their ability to grow at  $44.5 \pm 0.5^\circ\text{C}$  (2). Faecal coliforms give blue coloured colonies on the medium.

This medium have constituents like MiVeg peptone No. 3, MiVeg hydrolysate No. 1 and yeast extract which supplies necessary nutrients for the growth of faecal coliforms. Lactose serve as the carbon source as well as fermentable carbohydrate in the medium. Synthetic detergent No. 1 act as a inhibiting agent for the growth of contaminating gram- positive microorganisms. Aniline blue and Rosolic acid (MS2058) are the differential indicators which helps to differentiate faecal coliforms from coliforms.

#### Methodology

Suspend 52.1 grams of powder media in 1000 ml distilled water containing 10 ml 1% Rosolic Acid (MS2058). Mix thoroughly. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE.

#### Quality Control

##### Physical Appearance

Yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

##### Gelling

Firm, comparable with 1.5% Agar gel

##### Colour and Clarity of prepared medium

With addition of rosolic acid, red coloured slightly opalescent gel forms in petri plates

##### Reaction

Reaction of 5.21 % w/v aqueous solution pH:  $7.4 \pm 0.2$  at  $25^\circ\text{C}$

##### pH range

7.2-7.6

## Cultural Response/Characteristics

Cultural characteristics observed after an incubation for 22-24 hours at...

Organisms (ATCC)	Inoculum (CFU)	Growth at 35°C	Recovery at 35°C	Colour of the colony*	Growth at 45.5°C	Recovery at 45.5 °C
<i>Escherichia coli</i> (25922)	10-100	luxuriant	>50%	light blue	luxuriant	>50%
<i>Salmonella</i> serotype Typhimurium (14028)	10-100	luxuriant	>50%	pinkish	inhibited	0%
<i>Shigella flexneri</i> (12022)	10-100	luxuriant	>50%	pinkish	inhibited	0%
<i>Enterococcus faecalis</i> (29212)	10 <sup>3</sup> -2x10 <sup>3</sup>	inhibited	0%	-	inhibited	0%

Key : \* = on membrane filter

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.



**VM2122 M-FC MiVeg Agar Base**

*Escherichia coli*

## Further Reading

1. Geldreich, Clark, Huff and Bert, 1965, J.Am. Water Works Assoc., 57:208.
2. Eaton A.D., Clesceri L.S. and Greenberg A.E., (ed.), 2005, Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> 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 performs parameters.