Technical Information

Endo MiVeg Agar, Modified

Product Code : VM2075

Application:- Endo MiVeg Agar, Modified media is recommended for the detection of coliform and other enteric organisms.

Composition**

Ingredients	Gms / Litre
MiVeg peptone	10.00
Lactose	10.00
Dipotassium phosphate	2.50
Sodium sulphite	3.30
Basic fuchsin	0.30
Agar	12.50
Final pH (at 25°C)	7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Endo MiVeg Agar, Modified is prepared by using MiVeg peptone in place of peptic digest of animal tissue thus making it free of BSE/TSE risk. This media is the modification of Endo Agar media which was developed by Endo (1) for differentiation of lactose fermenters and lactose non- fermenters. Like Endo Agar media it is used for microbiological examination of potable water and waste water, dairy products and food (2, 3, 4).

Sodium sulfite and Basic fuchsin makes the medium selective by suppressing gram positive organisms. Coliforms ferment lactose and produce pink to rose red colonies whereas Lactose non-ferments produce colourless to faint colonies against the pink background of the medium.

Lactose fermenting coliforms produce aldehyde and acid. The aldehyde in turn liberates fuchsin from the fuchsin-sulphite complex, giving rise to a red colouration of colonies. With *Escherichia coli*, this reaction is very pronounced as the fuchsin crystallizes, exhibiting a permanent greenish metallic lustre (fuchsin lustre) to the colonies. MiVeg peptone supply nitrogenous source to the test orgnisms.

Methodology

Suspend 38.6 grams of powder media in 1000ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely.

Sterilize by autoclaving at 15 lbs pressure (121^{0}C) for 15 minutes. Mix well before pouring into sterile petriplates.

Caution : Basic fuchsin is a potential carcinogen and care should be taken to avoid inhalation of the powdered dye and contamination of the skin.

Quality Control

Physical Appearance

Light purple coloured, homogeneous, free flowing powder that may contain a large amount of minute to small dark particles.

Gelling

Firm, comparable with 1.25% of Agar gel.

Colour and Clarity of prepared medium

Orangish pink coloured, clear to slightly opalescent gel with fine precipitate forms in petri plates.

Reaction

Reaction of 3.86% w/v aqueous solution is pH : 7.4 ± 0.2 at 25°C.

pH range

7.2-7.6

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colonies
Enterobacter aerogenes (13048)	10^4-10^5	luxuriant	>70%	Pink, mucoid
Escherichia coli (25922)	10^4-10^5	luxuriant	>70%	Pink to rose red with metallic sheen
S. serotype Typhi (6539)	10^4-10^5	luxuriant	>70%	Colourless to pale pink
Shigella sonnei (25931)	10^4-10^5	luxuriant	>70%	Colourless to pale pink
Klebsiella pneumonia (13883)	10^4-10^5	luxuriant	>70%	Pink, mucoid
Proteus vulgaris (13315)	10^4-10^5	luxuriant	>70%	Colourless to pale pink
Pseudomonas aeruginosa (27853)	10^4-10^5	luxuriant	>70%	Colourless, irregular
Enterococcus faecalis (29212)	10^4-10^5	luxuriant	>20%	Pink, small
Staphylococcus aureus (25923)	10^4-10^5	luxuriant	0%	__

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: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Tests and Methods of Assay of Antibiotics and Antibiotic containing Drugs, FDA, CFR, 1983 Title 21, Part 436, Subpart D, Washington, D.C.: U.S. Government Printing Office, paragraphs 436, 100-436, 106, p. 242-259, (April 1).

2. Grove and Randall, 1955, Assay Methods of Antibiotics Medical Encyclopedia, Inc. New York.

3. Kramer, J., G.G. Carter, B. Arret, J. Wilner, W.W. Wright, and A. Kirshbaum. 1968. Antibiotic residues in milk, dairy products and animal tissues: methods, reports and protocols. Food and Drug Administration, Washington, DC.

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
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