Technical Information

Endo MiVeg Agar Base

Product Code : VM2077

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

Composition

Ingredients	Gms / Litre
MiVeg peptone	10.00
Lactose	10.00
Dipotassium phosphate	3.50
Sodium sulphite	2.50
Agar	12.00
Final pH (at 25°C)	7.5 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Endo MiVeg Agar Base is prepared by adding MiVeg Peptone in place of Peptic digest of animal tissue thus making it free from BSE/TSE risk. Endo MiVeg Agar Base is the modification of Endo Agar which was developed by Endo (1) for differentiation of lactose fermenters and lactose non- fermenters. This media is used for microbiological examination of potable water, waste water, dairy products and food (2, 3, 4). Sodium sulfite and Basic fuchsin makes this medium selective by suppressing gram positive organisms. Coliform ferments lactose and produce pink to rose red colonies whereas lactose non-fermenters forms colourless to faint colonies against the pink background of 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 organism.

Methodology

Suspend 38 grams of powder media in 1000 ml distilled water. Add 4 ml of 10% Basic Fuchsin (MS2059). Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well before pouring into sterile petri plates.

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 1.2% 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 3.8% w/v aqueous solution is pH 7.5 ± 0.2 at 25°C.

pH Range

7.3-7.7

Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Enterobacter aerogenes (13048)	10^4-10^5	luxuriant	>70%	pink, mucoid
Escherichia coli (25922)	10^3-10^4	luxuriant	>70%	pink to rose red with metallic sheen
S. serotype Typhi (6539)	10^3-10^4	luxuriant	>70%	colourless to pale pink
Shigella sonnei (25931)	10^3-10^4	luxuriant	>70%	colourless to pale pink
Klebsiella pneumoniae (13883)	10^3-10^4	luxuriant	>70%	pink, mucoid
Proteus vulgaris (13315)	10^3-10^4	luxuriant	>70%	colourless to pale pink
Pseudomonas aeruginosa (27853)	10^3-10^4	luxuriant	>70%	colourless, irregular
Enterococcus faecalis (29212)	10^3-10^4	None to poor	>20%	pink, small
Staphylococcus aureus (25923)	10^3-10^4	inhibited	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 day.

Further Reading

1. Endo, 1904, Zentralbl. Bakteriol., Abt. I. Orig., 35:109.
2. Eaton A.D., Clesceri L.S. and Greenberg A.E., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st ed, APHA, Washington DC
3. Standard Methods for the Examination of Dairy Products. 17th Edition, 2004 Edited by H. Michael Wehr and Joseph H.Frank.
4. Downes FP and Ito K (Eds.), 2001, Compendium of Methods For The Microbio- logical Examination of Foods, 4th ed., APHA, Washington, D.C.

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