Technical Information

Violet Red MiVeg Agar

Product Code :VM1049

Application:- Violet Red MiVeg Agar is a selective medium used for the isolation, detection and enumeration of coliform organisms from water, milk and other food products.

Composition**

Ingredients	Gms / Litre
MiVeg peptone	7.0
Yeast extract	3.0
Sodium chloride	5.0
Synthetic detergent No. I	1.5
Lactose	10.0
Neutral red	0.03
Crystal violet	0.002
Agar	15.0
Final pH (at 25°C)	7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Violet Red MiVeg Agar is prepared by adding vegetable peptones in place of animal based peptones thereby making the medium free from BSE/TSE risks. Voilet Red MiVeg Agar is the modification of Violet Red Bile Agar recommended by APHA for the detection and enumeration of coliform organisms in water, milk, dairy and other food products (1,2,). Synthetic detergent No.1 and Crystal violet added to the medium inhibits other organisms thereby imparts selectivity to the medium. Crystal violet inhibits gram-positive microorganisms especially *Staphylococci*. Neutral red is the pH indicator. Lactose fermenters produce red coloured colonies (3) whereas lactose non-fermenters and late lactose fermenters produce pale colonies. Other related gram- negative bacteria can be suppressed by incubating at >42°C or by anaerobic incubation. An overlay method is helpful to improve the specificity of the medium. Incubation may be carried out at > 42°C for 18 hours, 32°C for 24-48 hours or 4°C for 10 days depending on the temperature characteristics of the organisms to be recovered (4).

Methodology

Suspend 41.53 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. If desired the media can be sterilized by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45°C and then pour into sterile petri plates.

Quality Control

Physical Appearance

Pinkish beige coloured, homogeneous, free flowingpowder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Reddish purple coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 4.15% 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 for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Enterobacter aerogenes (13048)	10^2-10^3	luxuriant	>50%	Pink
Escherichia coli (25922)	10^2-10^3	luxuriant	>50%	Pinkish red
Salmonella serotype Enteritidis (13076)	10^2-10^3	luxuriant	>50%	Colourless
Staphylococcus aureus (25923)	10^2-10^3	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. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
2. Standard Methods for the Examination of Dairy Products. 17th Edition, 2004 Edited by H. Michael Wehr and Joseph H.Frank.
3. Davis J.G., 1951, Milk Testing, Dairy Industries Limited, London; pg 131
4. Mossel D.A.A. and Vega C.L., 1973, Hlth. Lab. Sci., 11:303.

Disclaimer :

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