Technical Information

Violet Red MiVeg Broth

Product Code : VM1458

Application:- Violet Red M i Veg Broth is a selective medium used for the isolation and detection of coliform organisms from water, milk and other food products.

Composition**

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

** Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Violet Red MiVeg Broth is prepared by adding vegetable peptones in place of animal based peptones thereby making the medium BSE/TSE risk free. Like conventional medium, this medium is recommended by APHA for the detection and isolation of coliform organisms in water, milk, dairy and other food products (1,2,).
Synthetic detergent No.1 and Crystal violet imparts selctivity to the medium. Crystal violet inhibits gram-positive microorganisms especially *Staphylococci*. Neutral red is the pH indicator. Lactose-fermenters will change media colour pink to red whereas lactose non-fermenters and late lactose fermenters change colour to pale. Other related gram-negative bacteria can be suppressed by incubation at >42°C or by anaerobic incubation. 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 26.53 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling with stirring to dissolve the media completely. Dispense into sterile tubes. DO NOT AUTOCLAVE. If desired the media can be sterilized by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Pinkish beige coloured, homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Reddish purple coloured, clear solution in tubes.

Reaction

Reaction of 2.65 % w/v aqueous solution of the medium at 25°C pH 7.4 ± 0.2.

pH range

7.2-7.6

CulturalResponse/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Colour of Media
Enterobacter aerogenes (13048)	10^2-10^3	luxuriant	Pinkish-red
Escherichia coli (25922)	10^2-10^3	luxuriant	Pinkish-red
Salmonella serotype Enteritidis(13076)	10^2-10^3	luxuriant	Orangish- yellow
Staphylococcus aureus (25923)	10^2-10^3	inhibited	-

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. 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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