Technical Information

Mucate Control MiVeg Broth

Product Code : VM2227

Application:- Mucate Control MiVeg Broth is recommended for identification of enteropathogenic *Escherichia coli* and *Salmonella* species from milk and milk products on the basis of mucate utilization.

Composition

Ingredients	Gms / Litre
MiVeg peptone	10.00
Bromo thymol blue	0.024
Final pH (at 25°C)	7.4±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Mucate Control MiVeg Broth is prepared by vegetable peptones in place of animal based peptones which makes the medium free from BSE/TSE risks. This medium is the modification of Mucate Broth which is prepared based on the formula originally developed by Kauffman and Petersen (1) recommended by APHA (2) for identification of enteropathogenic *Escherichia coli* from milk and milk products. It can also be used as an aid in differentiation of *Enterobacteriacea*e especially within *Salmonella* genus (4). The Bromothymol blue present in the medium serve as a pH indicator. Mucic acid is a saccharolactic acid or also called as tetrahydroxyadipic acid and serve as a sole carbon source in the medium. The colour of the pH indicator changes to yellow due to fermentation of mucic acid by enteropathogenic *Escherichia coli*, *Salmonella* serotype Paratyphi B and also by *Klebsiella pneumoniae* (3). If the medium remains blue-green the organisms being tested does not utilize the mucate. This medium contains MiVeg peptone which provides the necessary nutrients to the organisms. Transfer a loopful of 24 hour Tryptone MiVeg Broth (VM1463) culture to Mucate MiVeg Broth. Include a uninoculated MiVeg Broth tube as a control. Incubate at 35°C for 48 ± 1 hour. A negative test result is indicated by a blue or unchanged colour in this broth.

Methodology

Suspend 10 grams of powder media in 1000 ml distilled water. Mix thoroughly. Dissolve Mucic acid by slowly adding 5 N sodium hydroxide and stirring. Dispense in 5 ml amounts in screw-capped tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 10 minutes.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Blue coloured, clear solution without any precipitate.

Reaction

Reaction of 1.0 % w/v aqueous solution 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 24-48 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Colour of the medium
Escherichia coli (25922)	10^2-10^3	luxuriant	yellow
Klebsiella pneumoniae (13883)	10^2-10^3	luxuriant	yellow
Salmonella serotype Paratyphi B	10^2-10^3	luxuriant	yellow

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.Kauffmann F., and Petersen A., 1956, Acta. Pathol. Microbiol. Scand., 38 (6) : 481.

2. Standard Methods for the Examination of Dairy Products. 2004 17th Wehr, HM and Frank, JH. 2004

3. MacFaddin JF., 1985, Media for Isolation-Cultivation-Identification–Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.

4. Ewing., 1986, Edwards and Ewing's identification of Enterobacteriaceae, 4th Ed., Elsevier Science Publishing Co., Inc. New York.

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 in fingement of any patents. Do not use the products if it fails to meet specificatons for identity and performens parameters.