Technical Information

KF Streptococcal MiVeg Broth Base

Product Code : VM1249

Application:- KF Streptococcal MiVeg Broth Base is recommended for detection and enumeration of fecal Streptococci in water supplies.

Composition

Ingredients	Gms / Litre
MiVeg special peptone	10.0
Yeast extract	10.0
Sodium chloride	5.0
Sodium glycerophosphate	10.0
Sodium carbonate	0.636
Maltose	20.0
Lactose	1.0
Sodium azide	0.4
Phenol red	0.018
Final pH (at 25°C)	7.2 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

KF Streptococcal MiVeg Broth Base is prepared by adding MiVeg special peptone in place of Peptone special thus making free from BSE/TSE risks. KF (Kenner-Faecal) Streptococcal MiVeg Broth Base is the modification of KF (Kenner-Faecal) Streptococcal Broth Base which was developed by Kenner et al (1), for detection and enumeration of faecal *Streptococci* in water. Like conventional medium, this medium is recommended for enumeration of faecal *Streptococci* found in food but it is not an official medium for wastewater examination (4). This is a non-specific medium for presumptive identification of Group D *Streptococci* therefore further test are mandatory (2).

MiVeg special peptone, and yeast extract supplies essential growth factor for bacterial multiplication. Lactose and Maltose serve as the energy sources of the medium. Sodium azide in the medium inhibits gram-negative bacteria. Bacteria resistant to azide, utilize lactose and/or maltose and produces acid which in turn changes phenol red indictor colour to yellow. Addition of 1% TTC (MS2057) in the membrane filter procedure, imparts deep red colour to the *Streptococcal* colonies due to the reduction of 2, 3, 5- Triphenyl Tetrazolium chloride to an acid azo dye.

Methodology

Suspend 57 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Dispense and Sterilize by autoclaving at 15 lbs pressure (121°C) for 10 minutes. If desired for use in the membrane filter technique, 1 ml of 1% Triphenyl Tetrazolium Chloride (TTC - MS2057) may be added to each 100 ml of cooled broth.

Warning: Sodium Azide has a tendency to form explosive metal azides with plumbing materials thus it is advisable to use enough water to flush off the disposables.

Quality Control

Physical Appearance

Pinkish yellow coloured, homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Red coloured clear solution without any precipitate.

Reaction

Reaction of 5.7% w/v aqueous solution is pH 7.2 ± 0.2 at 25°C.

pH Range

7.0-7.4

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 48-72 hours.

Organisms (ATCC)	Growth	Colour of medium
Enterobacter aerogenes (13078)	inhibited	–
Enterococcus faecalis (29212)	luxuriant	Yellow
Escherichia coli (25922)	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 day.

Further Reading

1. Kenner, Clark and Kabler, 1961, Appl. Microbiol., 9:15.
2. MacFaddin J.F., 2000(ed), Biochemical Tests for Identification of MedicalBacteria, 3 edition, Lippinicott Williams and Wilkins, New York.
3. Vanderzant C and Splittstoesser DF (Eds.), 1992, Compendium of Methods For The Microbiological Examination of Foods, 3rd ed., APHA, Washington, D.C.
4. 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, D.C.

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