Technical Information

Letheen MiVeg Broth

Product Code : VM1165

Application:- Letheen MiVeg Broth is recommended for the determination of bactericidal activity of quaternary ammonium compounds using *Escherichia coli* or *Staphylococcus aureus*.

Composition

Ingredients	Gms / Litre
MiVeg peptone	10.00
MiVeg extract	5.00
Polysorbate 80	5.00
Sodium chloride	5.00
Lecithin	0.70
Final pH (at 25°C)	7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Letheen MiVeg Broth Base is prepared by adding vegetables peptones in place of animal based peptones thus making the medium free from BSE/TSE. This medium is formulated according to APHA (1) and further modified by Weber and Black (2) with addition of lecithin and polysorbate 80 that results in effective neutralization of quaternary ammonium compounds using bactericidal activity testing (3).

MiVeg extract, MiVeg peptone and Dextrose supplies the nitrogenous compounds, carbon, sulphur and other trace elements required for the growth of the organisms. Lecithin and polysorbate 80 enables the recovery of bacteria from solutions containing disinfectant residues used in sanitization of utensils and equipments. Lecithin neutralizes quaternary ammonium compounds and polysorbate 80 neutralizes phenolic disinfectants, hexachlorophene and formalin (4,5). Dehydrated medium may appear moist with 'brown sugar' appearance, does not indicate deterioration.

Methodology

Suspend 25.7 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Dark yellow coloured, may have slight lumps.

Colour and Clarity of prepared medium

Light yellow coloured, clear solution in tubes.

Reaction

Reaction of 2.57% w/v aqueous solution is pH 7.0 ± 0.2 at 25°C.

pH Range

6.8-7.2

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth
Escherichia coli (25922)	10^2-10^3	good to luxuriant
Staphylococcus aureus (6538)	10^2-10^3	good to luxuriant

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. 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.
2. Weber and Black, 1948, Soap Sanitary Chem., 24:134.
3. Weber and Black, 1948, Am. J. Public Health, 38:1405.
4. Bacteriological Analytical Manual, 8th ed; Revision A, 1998, AOAC, Washington, D.C.
5. MacFaddin J.F., 2000 (ed), Biochemical Tests for Identification of Medical Bacteria, 3rd edition, Lippinicott Williams and Wilkins, New York.

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