Technical Information

EE MiVeg Broth, Mossel

Product Code : VM1287

Application:- EE MiVeg Broth, Mossel is used for selective enrichment of *Enterobacteriaceae* in bacteriological examination of foods

Composition

Ingredients	Gms / Litre
MiVeg peptone	25.00
Dextrose	5.00
Synthetic detergent No.II	5.00
Disodium phosphate	6.45
Monopotassium phosphate	2.00
Brilliant green	0.0135
Final pH (at 25°C)	7.2 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

EE Mi Veg Broth, Mossel is prepared by using animal peptones in place of vegetable peptones thus making the media BSE/TSE risk free. It is the modification of EE Media which was formulated by Mossel et al and is recommended as an enrichment medium for *Enterobacteriaceae* used for bacteriological examination of foods (1) and animal feed stuffs (2).

MiVeg peptone and dextrose in the medium favours the growth of most members of *Enterobacteriaceae, thus* ensuring the detection of *Salmonella* and other lactose negative organisms. Brilliant green and synthetic detergent No.II selectively inhibiting gram-positive bacteria. Acid production causes the colour change from green to yellow, while a negative reaction results in no colour change and the medium remains green. Phosphates act as a buffering system of the medium.

Enterobacteriaceae can be injured during food processing procedures, which include exposure to low temperature, sub marginal heat, drying, radiation, preservatives or sanitizers(3). Recovery relies on proper resuscitation of damaged cells. The damaged cells are resuscitated in well-aerated Tryptone Soya MiVeg Broth (VM1011) for 2 hours at 25°C prior to enrichment in EE Broth, Mossel. This Media is an enrichment broth and should be used in conjunction with Violet Red Glucose MiVeg Agar (VM1581). Subcultures must be made onto lactose differential media as MacConkey MiVeg Agar (VM1081), Deoxycholate Citrate MiVeg Agar (VM1065) or Brilliant Green MiVeg Agar (VM1016) for the detection of lactose negative or delayed lactose fermenters. 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.

Methodology

Suspend 43.5 grams of powder media in 1000ml distilled water. Mix thoroughly. Distribute in 100 ml quantities in250 ml flasks. Stopper with cotton plugs or loose fitting caps. Shake well and heat in free flowing steam or boiling water for 30 minutes only. Avoid overheating of the medium as it is heat sensitive. Cool rapdily in cold running water. DO NOT AUTOCLAVE.

Quality Control

Physical Appearance

Greenish yellow coloured, homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Emerald green coloured, clear solution without any precipitate.

Reaction

Reaction of 4.35% 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°C for 20-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Acid
Enterobacter aerogenes (13048)	10^2-10^3	luxuriant	+
Escherichia coli (25922	10^2-10^3	luxuriant	+
Proteus mirabilis (25933)	10^2-10^3	luxuriant	+
Staphylococcus aureus (25923)	10^2-10^3	luxuriant	-
Shigella boydii (12030)	10^2-10^3	luxuriant	-
Salmonella serotypeEnteritidis (13076)	10^2-10^3	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. Mossel D.A.A., Visser M. and Cornellisen A.M.R.., 1963, J. Appl. .,26(3):444.
2. VanSchothurst M., et al, 1966, Vet Med., 13(3):273.
3. Hartman PA and S.A. Minnich, 1981. J Food Prot. 44 385-386.

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