Technical Information

Enterococcus Presumptive MiVeg Broth

Product Code : VM1419

Application:- Enterococcus Presumptive MiVeg Broth is recommended for presumptive identification of *Enterococci* in water supplies, swimming pools, sewage etc.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	5.00
Yeast extract	5.00
Dextrose	5.00
Sodium azide	0.40
Bromo thymol blue	0.032
Final pH (at 25°C)	8.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Enterococcus Presumptive MiVeg Broth is prepared by adding MiVeg hydrolysate in place of Casein enzyme hydrolysate thus making the medium free from BSE/TSE associated risks. This medium is the modification of the medium formulated by Sandholzer and Winter (1) for the detection of *Enterococci* in water supplies, swimming pools, sewage etc. The enterococci portion of the fecal *Streptococcus* group is a valuable indicator for determining the extent of fecal contamination of recreational surface waters (2).

MiVeg hydrolysate, Yeast extract and dextrose supplies the necessary growth nutrients needed for the growth of *Enterococci*. Sodium azide inhibits gram-negative organisms Bromo thymol Blue act as a pH indicator. The positive presumptive tests are confirmed by inoculating Enterococcus Presumptive MiVeg Broth (VM1419) to Enterococcus Confirmatory slant-broth combination prepared with an Azide Agar medium (Enterococcus Confirmatory MiVeg Agar, VM1392) overlaid with a Salt Azide Pencillin MiVeg Broth (Enterococcus Confirmatory MiVeg Broth, VM1394). A negative catalase test is considered confirmed positive evidence of the presence of *Enterococci.* Single strength medium can be used for small inoculum. Production of acid and turbidity in an azide presumptive broth when incubated at 45°C is considered positive presumptive evidence for the presence of *Enterococci.*

Methodology

Suspend 15.4 grams of powder media in 100 ml distilled water. Mix thoroughly and boil to dissolve the medium completely. Dispense in 100 ml quantities in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

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

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

Colour and Clarity of prepared medium

Yellow coloured, clear solution in tubes which acquires greenish tinge at the surface on standing.

Reaction

Reaction of 1.54% w/v aqueous solution is pH 8.4 ± 0.2 at 25°C.

pH Range

8.2-8.6

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 45°C for 24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Acid
Enterococcus faecalis (29212)	20-60	luxuriant	>70%	+
Escherichia coli (25922)	10^3	inhibited	0%	–

Key : + = acid production, yellow colour.
— = no acid production, no colour change.

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. Sandholzer and Winter, 1946, Commercial Fisheries Leaflet T1a.
2. Eaton A.D., Clesceie L.S. and Greebey A.E., (Eds.), 2005 Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.
3. Splittstoesser, Wright and Hucker, 1961, Appl. Micrbiol 9(4):303.

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