Technical Information

Streptococcus Enrichment MiVeg Broth (SE MiVeg Broth)

Product Code : VM1465

Application:- Streptococcus Enrichment MiVeg Broth (SE MiVeg Broth) is used for the *Streptococci* (*Enterococus faecalis)* enrichment.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	26.0
Yeast extract	6.0
Synthetic detergent No. II	3.0
Sodium chloride	5.0
Sodium citrate	1.0
Esculin	1.0
Ferric ammonium citrate	0.5
Sodium azide	0.25
Final pH (at 25°C)	7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

SE MiVeg Broth is prepared by adding vegetable peptones in place of animal based peptones thereby making the medium BSE/TSE risks free. Streptococcus Enrichment MiVeg Broth is the modification of the Streptococcus Enrichment Broth (S.E. Broth). Rochaix first observed the ability of *Enterococci* to hydrolyse esculin (1). *Enterococci* can hydrolyze esculin but other *Streptococci* fail to do so. Presumptive identification of Group D *Streptococci* by bile esculin test was reported by Facklam and Moody (2). Later on, Isenberg et al (3) modified Bile Esculin Medium by reducing the bile concentration and adding sodium azide to the medium.

MiVeg hydrolysate and yeast extract supplies all the essential nutrients required for the optimum growth of *Streptococci*. Group D *Streptococci* (including *Enterococci*) hydrolyses esculin to esculetin and dextrose. Esculetin reacts with ferric ammonium citrate to form a dark brown-black coloured complex (4). Synthetic detergent No. II is inhibitory towards gram-positive bacteria other than *Streptococci*. Sodium azide inhibits gram-negative bacteria.

Methodology

Suspend 42.8 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat if necessary to dissolve the medium completely. Dispense in 9 ml asmounts into test tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 20 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

Light amber coloured, clear solution with a bluish tinge.

Reaction

Reaction of 4.28% 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 30°C for 18-48hours.

Organisms (ATCC)	Growth	Colour of the medium
Enterococcus faecalis (29212)	good to luxuriant	black
Escherichia coli (25922)	inhibited	-
Staphylococcus aureus (25923)	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. Rochaix, 1924, C.R. Soc. Biol., 90:771.
2. Facklam and Moody, 1970, Appl. Microbio., 20:245.
3. Isenberg, Goldberg and Sampson, 1970, Appl. Microbiol., 20:433.
4. MacFaddin J., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd ed., Williams and Wilkins, Baltimore.

Disclaimer :

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