Technical Information

M-Staphylococcus MiVeg Broth

Product Code : VM2120

Application:- M-Staphylococcus MiVeg Broth is a selective medium recommended for detection and isolation of *Staphylococci* by membrane filter technique.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	10.0
Yeast extract	2.5
Lactose	2.0
Mannitol	10.0
Dipotassium hydrogen phosphate	5.0
Sodium chloride	75.0
Sodium azide	0.049
Final pH (at 25°C)	7.0±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

M-Staphylococcus MiVeg Broth is prepared by using MiVeg hydrolysate in place of casein enzymic hydrolysate thereby making the medium free from BSE\TSE risks. This medium is the modification of M-Staphylococcus Broth which is used for detection and isolation of *Staphylococci* by membrane filter technique. It is like the conventional medium is especially used for isolating pathogenic and enterotoxigenic *Staphylococci* (1).

This medium contains MiVeg hydrolysate and yeast extract which supplies all essential growth factors like nitrogen, carbon, sulphur, vitamins and trace ingredients. The 7.5% concentration of sodium chloride results in the partial or complete inhibition of bacteria except *Staphylococci*. Mannitol and lactose serve as the energy sources. Sodium azide inhibits gram negative organisms. Observe membrane for growth and pigment production. For testing of Mannitol fermentation few drops of bromothymol blue is added to the areas from where colonies have been removed, a yellow colour indicates positive results.

Methodology

Suspend 104.55 grams of powder media in 1000 ml distilled water. Mix thoroughly. Boil for 5 minutes. DO NOT AUTOCLAVE. Cool to 45°C and add 2 ml of the medium on to sterile absorbent pad placed in a sterile petri plate. For 10 ml inocula use double strength medium.

Warning: Sodium azide has a tendency to form explosive metal azides with plumbing materials. 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 without anyprecipitate.

Reaction

Reaction of 10.45 % w/v aqueous solution 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 18-48 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Mannitol fermentation	Pigment production
Enterococcus faecalis (29212)	10^2-10^3	inhibited	-	-
Escherichia coli (25922)	20-200	inhibited	Not applicable	-
Staphylococcus aureus (25923)	20-200	good luxuriant	+	+
Staphylococcus epidermidis(12228)	20-200	good luxuriant	-	-
Streptococcus pyogenes(19615)	10^2-10^3	inhibited	-	-

Key : Mannitol Fermentation :- + = Development of yellow colour from where the colony is removed when 2-3 drops of BTB is added

- = 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 days.

Further Reading

1. MacFaddin JF., 1985, Media for Isolation-Cultivation-Identification -Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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