Technical Information

Mitis Salivarius MiVeg Agar Base

Product Code : VM1259

Application:- Mitis Salivarius MiVeg Agar Base is used for the isolation from mixed cultures of *Streptococci* especially *Streptococcus mitis*, *Streptococcus salivarius*, *Enterococcus faecalis* showing alpha and gamma haemolytic reactions on Blood Agar.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	15.0
MiVeg peptone	5.0
Dextrose	1.0
Sucrose	50.0
Dipotassium phosphate	4.0
Trypan blue	0.075
Crystal violet	0.0008
Agar	15.0
Final pH (at 25°C)	7.0±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Mitis Salivarius MiVeg Agar Base is prepared by using MiVeg hydrolysate and MiVeg peptone in place of Casein enzymic hydrolysate and Miveg peptone thereby making the medium free from BSE/TSE risks. This medium is the modification of Mitis Salivarius Agar Base which is prepared as described by Chapman (1) for the isolation of *Streptococci* from mixed cultures showing alpha and gamma reactions on Blood Agar. 1% potassium tellurite makes the medium highly selective medium which enables to isolate *Streptococci* from highly contaminated specimens like exudates from body cavities and faeces etc., as it inhibits a wide variety of bacteria. Some authors have also used sodium azide in this medium to inhibit the growth of gram-negative bacteria like *Proteus* (2). Beta-haemolytic *Streptococci* produce colonies that resemble *Streptococcus mitis*.

This medium contains MiVeg hydrolysate and MiVeg peptone which supplies the essential growth nutrients. Dextrose and sucrose serve as the fermentable carbohydrates. Dipotassium phosphate maintains the buffering action in the medium. Trypan blue is an acidic, blue diazo dye while crystal violet is a basic dye and also a bacteriostatic agent which inhibits many gram-positive organisms.

Methodology

Suspend 90 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50-55°C and add 1 ml of sterile 1% Potassium Tellurite Solution (MS2052). DO NOT REHEAT the medium after the addition of tellurite solution.

Quality Control

Physical Appearance

Light blue coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Deep blue coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 9.0 % 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	Recovery	Colour of colony
Enterococcus faecalis (29212)	10^2-10^3	good-luxuriant	>70%	blue/black
Escherichia coli (25922)	10^2-10^3	inhibited	0%	-
Staphylococcus aureus (25923)	10^2-10^3	inhibited	0%	-
Streptococcus mitis (9895)	10^2-10^3	good-luxuriant	>70%	blue
Streptococcus pyogenes (19615)	10^2-10^3	good-luxuriant	>70%	blue
Streptococcus salivarius	10^2-10^3	good-luxuriant	>70%	blue (gum drop)

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. Chapman, 1946, Am. J. Digestive Diseases, 13:105.
2. Snyder and L ichstein, 1940, J. Infect. Dis., 67:113.
3. Lichstein and Snyder, 1941, J. Bact., 42:653.

Disclaimer :

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