

Technical Information

Nutrient MiVeg Agar with 1% MiVeg Peptone

Product Code : VM1012

Application:- Nutrient MiVeg Agar with 1% MiVeg Peptone is general purpose culture medium recommended for nonfastidious organisms and with addition of blood can be used for cultivating fastidious organism.

Composition

Ingredients	Gms / Litre
MiVeg peptone	10.0
MiVeg extract	5.0
Sodium chloride	5.0
Agar	15.0
Final pH (at 25°C)	7.4±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Nutrient MiVeg Agar with 1% MiVeg Peptone is prepared by using vegetable peptones in place of animal based peptones, thereby making the medium free from BSE/TSE risks. Peptic digest of animal tissue and Beef extract are replaced with plant based MiVeg peptone and MiVeg extract respectively which are nutritionally rich and supply essential nitrogenous compounds and growth factors (1).

This medium has almost double concentration of these nitrogen sources making it more nutritive. MiVeg extract and MiVeg peptone present in the medium supplies the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients to the nonfastidious organisms like *Bacillus subtilis* and *Staphylococcus aureus*. Sodium chloride maintains osmotic balance of the medium.

With the addition of 10% v/v blood or other biological fluids like ascitic fluid, serum etc, this medium is recommended for growing fastidious organisms.

It can also be used as a sterility testing medium for aerobes against Nutrient Broth, (animal based) recommended for microbial limit tests as per standard pharmacopoeia (2).

Methodology

Suspend 35 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. If desired add 10% v/v blood after cooling to 40°C.

Quality Control

Physical Appearance

Light yellow to yellow coloured may have slightly greenish tinge, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow coloured, clear to slightly opalescent gel forms in petri plates. With the addition of blood, cherry red coloured, opaque gel forms in petri plates

Reaction

Reaction of 3.5 % w/v aqueous solution pH: 7.4 ±0.2 at 25°C

pH range

7.2-7.6

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours

Organisms (ATCC)	Inoculum (CFU)	Growth*	Recovery	Growth**	Haemolysis
<i>Staphylococcus aureus</i> (25923)	10 ² -10 ³	luxuriant	>70%	luxuriant	Beta
<i>Neisseria meningitidis</i> (13090)	10 ² -10 ³	good	>50%	luxuriant	None
<i>Streptococcus pneumonia</i> (6303)	10 ² -10 ³	good	>50%	luxuriant	Alpha
<i>Streptococcus pyogenes</i> (19615)	10 ² -10 ³	good	>50%	luxuriant	Beta

Key: * = without blood

** = with blood

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° in sealable plastic bags for 2-5 days.

Further Reading

1. MacFaddin, J. (1985); Methods for Isolation- Cultivation- Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
2. IP: Indian Pharmacopoeia, 1996. Govt. of India 1996. The controller of Publication, Delhi

Disclaimer :

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