Technical Information

Columbia Broth Base, MiVeg

Product Code : VM1145

Application:- Columbia Broth Base , MiVeg is used for the cultivation of fastidious organisms from clinical specimens.

Composition

Ingredients	Gms / Litre
MiVeg special peptone	10.0
MiVeg peptone No. 5	10.0
MiVeg infusion	3.0
L-Cystine hydrochloride	0.1
Dextrose	2.5
Sodium chloride	5.0
Magnesium sulphate	0.1
Ferrous sulphate	0.02
Sodium carbonate	0.6
Tris (hydroxymethyl) aminomethane	0.83
Tris (hydroxymethyl) aminomethane HCl	2.86
Final pH (at 25°C)	7.5±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Columbia Broth Base , MiVeg is prepared by using vegetable peptone in place of animal based peptones which makes the medium BSE/TSE risk free. This medium is the modification of the animal based medium developed by Morello and Ellner for the recovery ofmicroorganisms from blood cultures (1). In this medium the growth appears earlier in a substantial number of clinical blood cultures.

It contains MiVeg peptones and MiVeg infusion which supplies nitrogen, carbon, vitamins and trace nutrients essential for growth. Dextrose serve as a carbon energy source. Magnesium and iron are incorporated to facilitate organism growth. Starch, which was originally included in Columbia Blood Agar Base, MiVeg, is omitted from this and the addition of salts were found to be beneficial for the recovery of organisms. Tris salts maintain buffering action to the medium.

A formulation with higher cystine can be used for improved recovery of aerobic as well as anaerobic organisms. In the blood culture bottles if SPS is added then it inhibitscomplement and lysozyme activity and interferes with phagocytosis and destroys the aminoglycosides (2).

Methodology

Suspend 35 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. If desired, SPS (Sodium polyanethol sulphonate) may be added in a final concentration of 0.01%. Dispense into tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Light amber coloured, clear solution without any precipitate.

Reaction

Reaction of 3.5 % w/v aqueous solution pH: 7.5 ±0.2 at 25°C

pH range

7.3-7.7

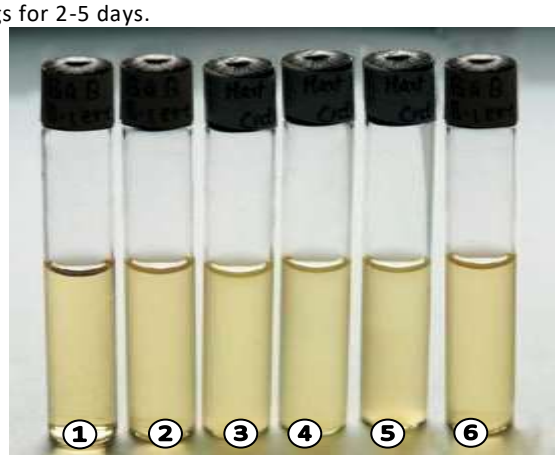
Cultural Response/Characteristics

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

Organisms (ATCC)	Growth
Clostridium perfringens (12924)	luxuriant
Neisseria meningitidis (13090)	luxuriant
Staphylococcus aureus (25923)	luxuriant
Streptococcus mitis (9895)	luxuriant
Streptococcus pyogenes (19615)	luxuriant

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.



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1. Control
2. *Streptococcus pyogenes*
3. *Clostridium perfringens*
4. *Neisseria meningitidis*
5. *Staphylococcus aureus*
6. *Streptococcus mitis*

Further Reading

1. Morello and Ellner, 1969, Appl. Microbiol., 17:68.
2. Reller, Murray and MacLowry, 1982, Cumitech 1A, Blood cultures II. Coord. Ed., ASM, Washington D.C

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
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