Technical Information

Mycoplasma Synoviae MiVeg Medium Base

Product Code : VM1624

Application:- Mycoplasma Synoviae Medium Base with supplements is recommended for cultivation of avian strains of *Mycoplasmas* .

Composition

Ingredients	Gms / Litre
MiVeg special infusion	7.500
MiVeg infusion	10.000
MiVeg peptone No. 3	10.000
Sodium chloride	5.000
Disodium phosphate	2.500
Dextrose	2.000
Yeast autolysate	5.000
Tris buffer	0.250
2,3,5-Triphenyl tetrazolium chloride	0.050
Final pH (at 25°C)	8.0±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Mycoplasma Synoviae MiVeg Medium Base is prepared by using vegetable peptones in place of animal based peptones which makes the medium free from BSE/TSE risk. It is a modification of Mycoplasma Synoviae Medium Base.

Genus *Mycoplasma* belongs to the class Mollicutes characterized by absence of cell wall, small genome and low G + C content, and were first recognized from a case of pleropneumonia in a cow. (1). The organism was designated “pleuropneumonia-like organism”, or PPLO.

The medium ingredients and all the supplements should be free of any toxic substances even in small amounts for the cultivation of Mycoplasma. Many *Mycoplasma* require serum for their good growth and to prevent the growth of contaminating organisms addition of antibiotic is necessary. Mostly the *Mycoplasma* species are aerobic or facultatively anaerobic but some are microaerophilic. Few are anaerobic saprophytic *Mycoplasma* which grow best at 22-35°C while pathogenic strains grow at 35°C.

This Medium contains yeast autolysate which is a rich source of Nicotinamide Adenine Dinucleotide (NAD) required by *Mycoplasma synoviae.* MiVeg special infusion ,Veg infusion and Veg peptone No.3 present in the medium supplies organic nitrogen, carbon, sulphur, vitamins and trace elements. Sodium chloride maintains the osmotic equilibrium. Tris buffer and disodium phosphate serve as the buffering system of the medium. Horse serum provides growth factors including lipid compounds to *Mycoplasma* . TTC helps to identify TTC reducing *Mycoplasmas* (2). To inhibit bacterial growth of contaminating microorganisms Penicillin and thallium acetate are added to the medium.

Methodology

Suspend 42.3 grams of powder media in 900 ml distilled water. Mix thoroughly to dissolve the medium completely. Sterilizey filtration and aseptically add 100 ml sterile Horse Serum (BA2239) and 1,000,000 units Penicillin and 0.25 gram thallium acetate. Mix well before dispensing.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent solution

Reaction

Reaction of 4.23 % w/v aqueous solution pH: 8.0 ±0.2 at 25°C

pH range

7.80-8.20

Cultural Response/Characteristics

Cultural characteristics observed in presence of 10% Carbon dioxide (CO_2), with added sterile Horse Serum (BA2239), after an incubation at 35 - 37°C for 48- 72 hours.

Organisms (ATCC)	Growth
Mycoplasma gallinarium (19708)	good-luxuriant
Mycoplasma synoviae (25204)	good-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.

Further Reading

1. Forbes. A. B., Sahm D. F., 2002, Bailey and Scott's Diagnostic Microbiology, 11th Ed., The C.V. Mosby Co., St. Louis.
2. Bauriaud R., Seror C., Lareng M. B., Lefevre J. C.,1992, Pathologie Biologie, 40, 479-482.

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