

Technical Information

Fletcher Leptospira MiVeg Medium Base

Product Code :VM1239

Application:- Fletcher Leptospira MiVeg Medium Base (Leptospira MiVeg Medium Base, Fletcher) with added serum is used for isolation, cultivation and maintenance of *Leptospira* species.

Composition**

Ingredients	Gms / Litre
MiVeg peptone	0.3
MiVeg extract	0.2
Sodium chloride	0.5
Agar	1.5
(Final pH (at 25°C)	7.9±0.2

** Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

This medium is prepared by using vegetable peptones based peptones by vegetable peptones that makes the medium free of BSE/TSE risks. Fletcher Leptospira MiVeg Medium Base is the modification of Fletcher Leptospira Medium Base which is prepared according to the formulation of Fletcher (1) and used for isolation of *Leptospira* from blood, urine and kidney specimens (2). MiVeg peptone and MiVeg extract supplies nitrogen vitamins and carbon sources. Sodium chloride maintains the osmotic balance of the medium. Small amount of agar provides a semi solid consistency, which favours multiplication of *Leptospira* from blood or urine of patients or from animal tissues (3). It has the added advantage that it evaporates less rapidly than liquid medium and helps to maintain the virulence of freshly isolated strains since less frequent subculture is required (3). Rabbit serum provides long chain fatty acids. *Leptospira* metabolize the fatty acids by beta oxidation and the metabolic end products formed are acetate and carbon dioxide.

Methodology

Suspend 2.5 grams of powder media in 920ml distilled water (Volume of water should be appropriate to compensate addition of enrichment). Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50-55°C and aseptically add 80 ml sterile. *Leptospira* enrichment (Rabbit serum) to make final volume to 1litre.

Quality Control

Physical Appearance

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

Gelling

Semisolid, comparable with 0.15% Agar gel.

Colour and Clarity

Very light yellow coloured, slightly opalescent gel forms in tubes.

Reaction

Reaction of 0.25% w/v aqueous solution at 25°C.

pH range

7.7-8.1

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 30°C for upto 5 days

Organisms (ATCC)	Growth
<i>Leptospira interrogans</i> serotype <i>australis</i>	luxuriant
<i>Leptospira interrogans</i> serotype <i>canicola</i>	luxuriant
<i>Leptospira interrogans</i> serotype <i>grippityhosa</i>	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° in sealable plastic bags for 2-5 days.

Further Reading

1. Fletcher, 1927, Trans. Roy. Soc. Trop. Med. and Hyg., 21:265.
2. Galton, Acree, Lewis and Bather, 1956, J. Amer. Vet. Med. Assoc., 128:87.
3. Collee, J.G.; Marmin, B.P., Fraser, A.G and Simmons A (eds) Mackie and McCartney, Practical Medical Microbiology, (1996) 14th ed., Churchill Livingstone, New York.

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