Technical Information

Semisolid RV MiVeg Medium Base

Product Code : VM2428

Application:- Semisolid RV MiVeg Medium Base is used for the isolation of *Salmonella* from food stuffs and other materials based on selective motility.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate No. 1	4.60
MiVeg hydrolysate	4.60
Sodium chloride	7.34
Magnesium chloride, anhydrous	10.93
Malachite green	0.037
Agar	2.70
Final pH (at 25°C)	5.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Semisolid RV MiVeg Medium Base is prepared by adding MiVeg hydrolysate No. 1 and MiVeg hydrolysate in place of Tryptose and Casein enzymic hydrolysate thereby making the medium free from BSE/TSE risks. Semisolid RV MiVeg Medium Base is the modification of Semisolid RV Medium Base which was formulated as described by DeSmedt et al (1) for the detection of motile *Salmonella* species from food and environmental specimens. Like conventional medium , this medium detects more *Salmonella* positive samples than the routinely used enrichment procedures (2, 3, 4).

MiVeg hydrolysate No.1, MiVeg hydrolysate supplies all the essential nutrients required for the growth of the organisms. Novobiocin addition as a supplement and Malachite green in the medium selectively inhibits most of the gram-positive organisms. *Salmonella* survives at slight high osmotic pressure owing to presence of magnesium chloride in the medium, grows at slightly low pH and is comparatively resistant to malachite green. The working of medium is based on the ability of *Salmonella* species to migrate in the selective medium competing with other motile organisms, thus producing opaque halos of growth. The motile bacteria will show a halo or zone of growth originating from inoculation spot.

Methodology

Suspend 15.10 grams of powder media in 500 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45°C and aseptically add 1 vial of IMRV/ RV Selective Supplement (MS2193). Mix well before pouring into sterile petri plates.

Note : The motility of *Salmonellas* can be drastically reduced when the agar surface becomes too dry. Hence, the plates should be well dried before use. If visible moisture occurs on the lid of the plates or the surface of agar, it must be removed. While incubation, incubate the plates aerobically in an upright position for no longer than 24 hours at 42°C.

Quality Control

Physical Appearance

Light green coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 0.27% Agar gel.

Colour and Clarity of prepared medium

Blue coloured clear to slightly opalescent semisolid medium forms in petri plates.

Reaction

Reaction of 3.02% w/v aqueous solution is pH 5.4 ± 0.2 at 25°C.

pH range

5.2-5.6

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 42°C for 18-24 hours. when one drop of culture is inoculated in the centre of the medium plate.

Organisms (ATCC)	Inoculum (CFU)	Growth	Motility
Citrobacter freundii (8090)	10^2-10^3	inhibited	-
Pseudomonas aeruginosa (27853)	10^2-10^3	inhibited	-
Salmonella serotype Enteritidis (13076)	10^2-10^3	luxuriant	+ #
Salmonella serotype Typhimurium (14028)	10^2-10^3	luxuriant	+ #

Key : # = opaque halos of growth originating from the inoculation spot

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. De Smedt J.M., Balderdijk R., Rappold H. and Lautenschlaeger D., 1986, J. Food Prot., 49:510.
2. De Smedt J.M., Balderdijk R., 1987, J. Food Prot., 50:658.
3. De Zutter L. et al, 1991, Int. J. Food Microbiol., 13:11.
4. De Smedt J.M. et al, 1991, Int. J. Food Microbiol., 13:301.

Disclaimer :

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