Semisolid RV Medium Base

M1428

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

Composition**

Ingredients	Gms / Litre
Tryptose	4.600
Casein enzymic hydrolysate	4.600
Sodium chloride	7.340
Magnesium chloride, anhydrous	10.930
Malachite green oxalate	0.037
Agar	2.700
Final pH (at 25°C)	5.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 15.10 grams in 500 ml distilled water. Heat with stirring to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45°C and aseptically add 1 vial of IMRV/RV Selective Supplement (FD193). Mix well and pour 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.

Principle And Interpretation

Semisolid RV Medium Base is based on the formulation described by DeSmedt et al (1) for the detection of motile *Salmonella* species from food and environmental specimens. This medium detects more Salmonella positive samples than the routinely used enrichment procedures (2, 3, 4).

Tryptose, casein enzymic hydrolysate provides the nitrogenous and carbonaceous substances and other essential growth nutrients. The motility of other microorganisms is largely inhibited by the selective agents (magnesium chloride, malachite green and novobiocin).

The working of medium is based on the ability of *Salmonella* species to migrate in the selective medium competing with the other motile organisms, thus producing opaque halos of growth. The motile bacteria will show a halo or zone of growth originating from inoculation spot.

Quality Control

Appearance
Light yellow to light blue homogeneous free flowing powder

Gelling
Semisolid, comparable with 0.27% Agar gel.

Colour and Clarity of prepared medium
Blue coloured clear to slightly opalescent semisolid gel forms in Petri plates.

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

pH
5.20-5.60

Cultural Response

M1428: Cultural characteristics observed after an incubation at 42-43°C for 18 - 24 hours with added IMRV/RV Selective Supplement (FD193)when one drop of culture is inoculated in the centre of the medium plate.(Motility is checked by inoculating a drop of culture in the centre of the medium plate).

Organism	Inoculum (CFU)	Growth	Motility
Citrobacter freundii ATCC 8090	>=10^3	inhibited	-
Pseudomonas aeruginosa ATCC 9027	>=10^3	inhibited	-
Salmonella Enteritidis ATCC 13076	50-100	good-luxuriant	Positive reaction, colourless to light pink zone
Salmonella Typhimurium ATCC 14028	50-100	good-luxuriant	Positive reaction, colourless to light pink zone

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference

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.

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