



Semisolid RV Medium w/ 0.9% Agar

M1998

Semisolid RV Medium w/0.9% Agar is recommended for the enrichment of *Salmonellae* under high osmotic pressure, low pH and at 43°C with modest nutritional requirements.

Composition**

| Ingredients | Gms / Litre |
|-------------------------------|-------------|
| Soya peptone | 4.500 |
| Yeast extract | 2.500 |
| Sodium Chloride | 7.200 |
| Monopotassium Phosphate | 1.440 |
| Magnesium chloride, anhydrous | 36.00 |
| Malachite green | 0.036 |
| Dextrose | 1.000 |
| Agar | 9.000 |
| Final pH (at 25°C) | 5.2 ± 0.2 |

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 61.68 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in tubes or flasks or as desired. Sterilize by autoclaving at 10 lbs pressure (115°C) for 15 minutes.

Principle And Interpretation

Semisolid RV Medium w/0.9% agar can be used for enrichment of *Salmonellae* from human faeces without pre-enrichment (1,2,3). Similar medias are prescribed for the detection of motile *Salmonella* species from food and environmental specimens (4).

Soya peptone and yeast extract provides the nitrogenous and carbonaceous substances and other essential growth nutrients. Sodium chloride maintains the osmotic balance. Malachite green and high concentration of magnesium chloride inhibits gram positive bacteria. Potassium phosphate buffers the medium well. This medium is used for enrichment of *Salmonella* and incubated at 43°C.

Quality Control

Appearance

Light yellow to light blue homogeneous free flowing powder

Gelling

Firm comparable with 0.9% Agar gel.

Colour and Clarity of prepared medium

Blue coloured clear to slightly opalescent gel forms in tubes.

Reaction

Reaction of 6.17% w/v aqueous solution at 25°C. pH : 5.2 ± 0.2

pH

5.00-5.40

Cultural Response

M1998: Cultural characteristics observed after an incubation at 42-43°C for 18 - 24 hours.

| Organism | Inoculum (CFU) | Growth |
|---|----------------|----------------|
| <i>Salmonella</i> Enteritidis ATCC 13076 | 50-100 | good-luxuriant |
| <i>Salmonella</i> Typhimurium ATCC 14028 | 50-100 | good-luxuriant |
| <i>Salmonella</i> Typhi ATCC 6539 | 50-100 | good-luxuriant |
| <i>Escherichia coli</i> ATCC 25922 | 50-100 | none-poor |

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. Van Schothorst, M., et al., (1987). Food Microbiol. 4,11
2. Van Schothorst, M., et al., (1983). J.Appl. Bact.54, 209
3. Peterz, M., et al., (1989). J.Appl. Bact. 66,523
4. De Smedt J.M., Balderdijk R., Rappold H. and Lautenschlaeger D., 1986, J. Food Prot., 49:510.

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