Modified Rappaport Vassiliadis Medium M1137

Intended Use:

Recommended for selective enrichment of Salmonellae from food and environmental specimens.

Composition**

Ingredients	Gms / 1110 ml
Soya peptone	5.000
Sodium chloride	8.000
Potassium dihydrogen phosphate	1.600
Magnesium chloride hexahydrate	40.000
Malachite green	0.040
Final pH (at 25°C)	5.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30.07 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified/distilled water. Heat gently if necessary to dissolve the medium completely. Dispense in tubes or flasks as desired. Sterilize by autoclaving at Δ 115°C for 15 minutes.
Δ corresponds to 10 lbs pressure.

Principle And Interpretation

Modified Rappaport Vassiliadis Medium is a selective broth for the enrichment of *Salmonella* from foodstuffs, environment and clinical specimens. The original formulation described by Rappaport et al (3) with magnesium chloride hexahydrate was modified by Vassiliadis et al (4) by lowering the concentration of malachite green and raising the incubation temperature to 43°C. This medium is recommended as the selective enrichment medium for isolation *of Salmonella* from food and environmental specimens.
Soya peptone serves as a source of nitrogen and carbon compounds, long chain amino acids, vitamins and other essential nutrients. Phosphates buffer the medium. Magnesium chloride raises the osmotic pressure in the medium. Malachite green inhibits gram positive bacteria and selectively enriches growth of *Salmonella* species. Sodium chloride maintains the osmotic balance.

Type of specimen

Food samples and Environmental samples

Specimen Collection and Handling:

The test specimen is added to Buffered Peptone Water (M614) and incubated at 35°C for 16 - 20 hours. This pre-enriched peptone water culture is inoculated into Modified Rappaport Vassiliadis Medium and incubated at 42 ± 1°C for 24 - 48 hours and further subcultured on Brilliant Green Agar (M016). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Further biochemical and serological tests must be carried out for further identification.
2. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
3. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Light yellow to light blue homogeneous free flowing powder

Colour and Clarity of prepared medium
Blue coloured clear solution without any precipitate

Reaction
Reaction of 3.0% w/v aqueous solution at 25°C. pH : 5.2±0.2

pH
5.00-5.40

Cultural Response
Cultural characteristics observed after an incubation at different temperatures for 24-48 hours, when subcultured on Brilliant Green Agar Base (M016) and then incubated at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Recovery at 37°C	Recovery at 42 ± 1°C	Colour of colony
Escherichia coli ATCC 25922 (00013*)	50-100	fair	poor	yellowish green
Salmonella Paratyphi B ATCC 8759	50-100	good	good	pinkish white
Salmonella Enteritidis ATCC 13076 (00030*)	50-100	luxuriant	luxuriant	pinkish white
Salmonella Typhi ATCC 6539	50-100	fair-good	fair	reddish pink
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	luxuriant	pinkish white

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Rappaport F., Konforti N. and Navon B., 1956, J. Clin. Path., 9:261.
4. Vassiliadis P. Pateraki E., Papaiconomou N., Papadaicis J. A., Trichopoulos D., 1976, Annales de Microbiologie (Institute Pasteur), 127B : 195.

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