Rappaport Vassiliadis Soyabean Meal Broth (RVSM)

M1448

Intended Use

Selective enrichment medium for the isolation of *Salmonella* species.

Composition**

Ingredients	g/ L
Soya peptone	4.500
Sodium chloride	7.200
Potassium dihydrogen phosphate	1.260
Dipotassium hydrogen phosphate	0.180
Magnesium chloride	13.580
Malachite green	0.036
Final pH (at 25°C)	5.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 26.75 grams in 1000 ml purified/distilled water. Heat gently if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at Δ115°C for 15 minutes. Δ Corresponds to 10 lbs pressure.

Principle And Interpretation

Rappaport Vassiliadis Soyabean Meal Broth (RVSM) is modification of the Rappaport Vassiliadis Enrichment Broth, revised by van Schothorst (1,2,3). This medium is recommended as the selective enrichment medium for isolation of *Salmonella*. van Schothorst modified the original formula by addition of dipotassium hydrogen phosphate to buffer the medium and addition of anhydrous magnesium chloride to enhance the reliability of enrichment broth. Peterz (4) et al have also emphasized the importance of the concentration of magnesium chloride in the final medium. 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 RVSM Broth and incubated at 42 ± 1°C for 24 - 48 hours and further subcultured on Brilliant Green Agar (M016). For faecal specimens, no pre-enrichment is needed. Add 1 or 2 loopfuls of liquid faeces (or an emulsion of faeces in saline) to 10 ml of RVSM Broth pre-warmed to 42°C. Incubate at 42 ±1°C for 24 hours and streak on to a selective agar.

The medium contains soya peptone which provides essential growth nutrients. Magnesium chloride raises the osmotic pressure in the medium. Malachite green is inhibitory to organisms other than Salmonellae. The low pH of the medium, combined with the presence of malachite green and magnesium chloride, helps to select for the highly resistant *Salmonella* species. Phosphates buffer the medium to maintain the constant pH. Sodium chloride maintains the osmotic balance.

Type of specimen

Clinical samples - faeces; Food samples : meat and meat products

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6). For food samples, follow appropriate techniques for sample collection and processing as per guidelines (7). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic use. For professional use only. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Further biochemical and serological testing must be carried out for confirmation.

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 2.67% 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 for 18-24 hours for following temperature.

Organism	Inoculum (CFU)	Growth at 42±1°C	Recovery	Growth at 35-37°C
Escherichia coli ATCC 25922 (00013*)	50-100	fair	10-20%	poor
Salmonella Paratyphi B ATCC 8759	50-100	good	40-50%	good
Salmonella Typhi ATCC 6539	50-100	fair-good	30-40%	fair
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant	>=50%	good-luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store below 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 inorder 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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1. Rappaport F., Konforti N. and Navon B., 1956, J. Clin. Pathol., 9, 261-266
2. Van Schothorst M., Renauld A. and VanBeek C., 1987, Food Microbiol., 4:11-18.
3. Van Schothorst M. and Renauld A., 1983, J. Appl. Bacteriol., 54:209-215.
4. Peterz M., Wiberg C. and Norberg P., 1989, J. Appl. Bacteriol., 66,523-528.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. 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.
7. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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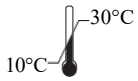
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
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CE **CE Marking**

Do not use if package is damaged

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