



Rappaport Vassiliadis Salmonella Enrichment Broth

RDM-RVS-01

Principle

The Rappaport Vassiliadis Salmonella Enrichment broth is the modification of the R10 medium (Rappaport et.al. 1956) or RV broth (Vassiliadis et.al. 1978), designed by Van Schothorst et al. (1987). Recommended by USP and JP for microbial limit testing medium for pharmaceutical products especially for *Salmonella species*. The media composed of soya peptone, magnesium chloride, sodium chloride, dipotassium phosphate, potassium dihydrogen phosphate, and malachite green. Soya peptone serves carbon and nitrogen sources for growth requirements. Magnesium chloride raises the osmotic pressure in the medium. The malachite green and magnesium chloride together act as selective agent and inhibit the growth of other organisms than *Salmonellae*. The low pH of the medium (5.2 ± 0.2 at 25°C), combined with the presence of malachite green and magnesium chloride, provides selectivity to highly resistant *Salmonella spp.* The phosphate buffers the medium.

Use: Recommended for selective enrichment of *Salmonella species* from pharmaceutical products in accordance with the microbial limit testing by harmonized principles of USP/JP.

Contents*

Ingredients	Gram/Litre
Soya Peptone	4.500
Magnesium Chloride Anhydrous	13.400
Sodium Chloride	8.000
Dipotassium hydrogen phosphate	0.400
Potassium Dihydrogen Phosphate	0.600
Malachite Green	0.036
pH at 25°C	5.2 ± 0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 27.00 grams in 1000 ml distilled water. Sterilize by autoclaving at **15 lbs pressure (115°C)** for 15 min, cool it to $42-45^\circ\text{C}$ and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Pale yellow with blue ting colored free flowing, homogeneous powder
Reaction of 2.70 % solution	5.2 ±0.2 at 25 °C
pH	5.00- 5.40
Color and clarity of ready medium	Greenish blue colored opalescent solution
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	Inoculum	Growth	Recovery	Colony color (On XLD Agar)	Incubation temperature & period
<i>Salmonella typhimurium</i> (ATCC 14028)	50-100	Luxurious	70-75%	Red with black centers	33-37 °C, 18-24 h

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.
4. *The Japanese Pharmacopoeia*, 17th Ed. (2016), The Ministry of Health, Labour And Welfare.
5. *The United States Pharmacopoeia*, (2014), The United States Pharmacopeial Convention. 12601 Twinbrook Parkway, Rockville, MD 20852.
6. Rappaport, F., N. Konforti, and B. Navon (1956) *A new enrichment medium for certain Salmonellae* J. Clin. Pathol. 9:261-266.
7. Vassiliadis, P., D. Trichopoulos, A. Kalandidi, and E. Xirouchaki (1978), *Isolation of Salmonellae from sewage with a new procedure of enrichment*. J. Appl. Bacteriol. 44:233-239.
8. Van Schothorst M., Renauld A. and VanBeek C., (1987), *Food Microbiol.*, 4:1

Disclaimer

The information contained in the technical data sheet is to the best of our knowledge is accurate and true based on the research and development work carried out by **ReadyMED**[®], Chaitanya Agro Biotech, Malkapur, Maharashtra. The products are neither intended for any therapeutic use for animal or human nor for any other *in-vivo* applications. The **ReadyMED**[®] products are only meant to be used for the laboratory, diagnostic, research, or further manufacturing purpose only. These technical outcomes should not be considered as the warranty of any kind expressed or implied, and no liability is accepted for infringement of any patent.