

TM 2242 - MEDIUM 8. RAPPAPORT VASSILIADIS SALMONELLA ENRICHMENT BROTH

INTENDED USE

Rappaport Vassiliadis *Salmonella* Enrichment Broth is recommended for selective enrichment of *Salmonella* species from pharmaceutical products in accordance with the microbial limit testing by harmonized methodology of IP.

PRODUCT SUMMARY AND EXPLANATION

Rappaport Vassiliadis Salmonella Enrichment Medium is designed according to the revised formulation by Van Schothorst et al and is recommended for the selective enrichment of Salmonellae from pharmaceutical products. This medium can also be used in direct enrichment of samples containing low inoculum. Present medium is a modification of the Rappaport Vassiliadis Enrichment Broth described by Van Schothorst and Renault. It is prepared as per the formulation in Indian Pharmacopoeia and is in accordance with the harmonized methodology of USP/EP/BP/JP/IP has been found to be superior to other *Salmonella* selective medias. Addition of magnesium chloride to the medium was reported by Peterz et al. *Salmonella* species can be isolated from human faeces without pre-enrichment by using this medium. *Salmonella* generally survive at little high osmotic pressure, grow at slightly low pH and are resistant to malachite green compared to other bacteria. These characteristics are exploited in this medium for selective enrichment of *Salmonella*.

The relatively lower concentration of nutrition, also aids selective enrichment of *Salmonella*. This medium was reported to be superior to *Salmonella* selective medium like Tetrathionate Broth and Selenite enrichment broth and to Tetrathionate- Brilliant Green Broth for the detection of Salmonellae in milk samples. The enriched culture of Rappaport Vassiliadis Salmonella Enrichment Broth can be further subcultured and isolated on Brilliant Green Agar or Xylose Lysine Deoxycholate Agar.

COMPOSITION

Ingredients	Gms / Ltr
Soya peptone	4.500
Sodium chloride	8.000
Dipotassium phosphate	0.400
Potassium dihydrogen phosphate	0.600
Magnesium chloride, hexahydrate	29.000
Malachite green	0.036

PRINCIPLE

Magnesium chloride present in the medium raises the osmotic pressure. Natural sugars of soya peptone provide essential growth nutrients and enhance the growth of *Salmonella*. Phosphate buffers the medium to maintain constant pH. Sodium chloride maintains the osmotic balance. Malachite green inhibits many gram-positive bacteria, while selectively enriches *Salmonella*.

INSTRUCTION FOR USE

- Dissolve 27.11 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense as desired into tubes and sterilize by autoclaving at 115°C for 30 minutes or as per validated cycle.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Light yellow to light blue homogeneous free flowing powder.
Appearance of prepared medium : Greenish blue coloured clear to slightly opalescent solution with a slight precipitate in tubes.
pH (at 25°C) : 5.2±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony	Incubation Temperature	Incubation Period
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	Red with black centers	30-35°C	<=18 Hours
<i>Staphylococcus aureus</i>	6538	>=10 ³	Inhibited	-	30-35°C	>=24 Hours
<i>Escherichia coli</i>	25922	50-100	None-poor	Yellow	30-35°C	18-24 Hours
<i>Escherichia coli</i>	8739	50-100	None-poor	Yellow	30-35°C	18-24 Hours
<i>Salmonella Enteritidis</i>	13076	50-100	Luxuriant	Red with black centers	30-35°C	18-24 Hours
<i>Salmonella Paratyphi B</i>	8759	50-100	Luxuriant	Red with black centers	30-35°C	18-24 Hours
<i>Staphylococcus aureus</i>	25923	>=10 ³	Inhibited	-	30-35°C	>=24 Hours
<i>Pseudomonas aeruginosa</i>	9027	>=10 ³	Inhibited	-	30-35°C	>=24 Hours
<i>Pseudomonas aeruginosa</i>	27853	>=10 ³	Inhibited	-	30-35°C	>=24 Hours

<i>Enterococcus faecalis</i>	29212	$\geq 10^3$	Inhibited	-	30-35°C	≥ 24 Hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	Red with black centers	30-35°C	18 -72 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.













Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Van Schothorst M., Renauld A. and VanBeek C., 1987, Food Microbiol., 4:11.
2. Van Schothorst M. and Renauld A., 1983, J. Appl. Bact., 54:209.
3. The United States Pharmacopoeia, 2011, The United States Pharmacopoeial Convention. Rockville, MD.
4. British Pharmacopoeia, 2011, The Stationery Office British Pharmacopoeia
5. European Pharmacopoeia, 2011, European Dept. for the quality of Medicines
6. Japanese Pharmacopoeia, 2008.
7. Peterz M., Wiberg C. and Norberg P., 1989, J. Appl. Bact., 66:523
8. McGibbon L., Quail E. and Fricker C.R. 1984, Inter. J. Food Microbiol. 1:171
9. Indian Pharmacopoeia, 2010 Ministry of Health and Family Welfare, Govt. of India

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedMer GmbH Buckhorn 16, 41143 Mönchengladbach, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only
Revision: 08 Nov., 2019