

TMT 008- RAPPAPORT VASSILIADIS SALMONELLA ENRICHMENT BROTH

INTENDED USE

For selective enrichment of *Salmonella* species from clinical samples.

PRODUCT SUMMARY AND EXPLANATION

Rappaport Vassiliadis Salmonella Enrichment Broth 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. 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 Xylose Lysine Deoxycholate Agar.

COMPOSITION

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

PRINCIPLE

The medium consists of Magnesium chloride present in the medium which 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

Inoculate the sample and Incubate at specified temperature and time.

QUALITY CONTROL SPECIFICATIONS

Appearance of prepared medium	:	Greenish blue coloured clear to slightly opalescent solution with a slight precipitate in tubes.
Quantity of Medium	:	10 ml of medium in tubes.
pH (at 25°C)	:	5.2 ± 0.2
Sterility Check	:	Passes release criteria

INTERPRETATION



Cultural characteristics observed after incubation for specified time. Recovery is carried out using Xylose Lysine Deoxycholate Agar, after enrichment in Rappaport Vassiliadis Salmonella Enrichment Broth.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony	Incubation Temperature	Incubation Period
<i>Salmonella</i> Typhimurium	14028	50-100	Luxuriant	Red with black centers	30-35°C	<=18 Hours
<i>Staphylococcus aureus</i> subsp. <i>aureus</i>	6538	$\geq 10^3$	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</i> Enteritidis	13076	50 -100	Luxuriant	Red with black centers	30-35°C	18 -24 Hours
<i>Salmonella</i> Paratyphi B	8759	50 -100	Luxuriant	Red with black centers	30-35°C	18 -24 Hours
<i>Staphylococcus aureus</i> subsp. <i>aureus</i>	25923	$\geq 10^3$	Inhibited	-	30-35°C	≥ 24 Hours
<i>Pseudomonas aeruginosa</i>	9027	$\geq 10^3$	Inhibited	-	30-35°C	≥ 24 Hours
<i>Pseudomonas aeruginosa</i>	27853	$\geq 10^3$	Inhibited	-	30-35°C	≥ 24 Hours
<i>Enterococcus faecalis</i>	29212	$\geq 10^3$	Inhibited	-	30-35°C	≥ 24 Hours

PACKAGING:

Pack of 25 Ready-To-Use Liquid Medium tubes containing 10 ml in each tube.

Pack of 50 Ready-To-Use Liquid Medium tubes containing 10 ml in each tube.

STORAGE


On receipt, store tubes in the dark at 10-25 °C. Avoid freezing and overheating. Do not open until ready to use. Minimize exposure to light. Tubed media stored as labeled until just prior to use may be inoculated up to the expiration date and incubated for the recommended incubation times. Allow the medium to warm to room temperature before inoculation.

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.

REFERENCES

1. The United States Pharmacopoeia, 2018, The United States Pharmacopoeial Convention. Rockville, MD.
2. British Pharmacopoeia, 2017, The Stationery office British Pharmacopoeia
3. European Pharmacopoeia, 2017, European Dept. for the quality of Medicines.
4. Japanese Pharmacopoeia, 2008.



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

***For Lab Use Only**
Revision: 25th March. 2022