Technical Information

Rappaport Vassiliadis Broth

Product Code: LQ1104H

Application:- For selective enrichment of *salmonella* species in accordance with harmonized methods of USP, EP, BP & JP.

Composition**

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

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Rappaport Vassiliadis Salmonella Enrichment Medium is designed according to the revised formulation by Van Schothorst et al (1) 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 Renauld (2) and prepared in accordance with the harmonized methodologyof USP/EP/BP/JP (3,4,5,6) has been found to be superior to other Salmonella selective medias. Addition of magnesium chlorideto the medium was reported by Peterz et al (7). *Salmonella* species can be isolated from human faeces without pre-enrichmentby using this medium. *Salmonella* generally survive at little high osmotic pressure, grow at slightly low pH and are resistantto malachite green compared to other bacteria. These characteristics are exploited in this medium for selective enrichment of *Salmonella* . 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* (8). Phosphate buffers the medium to maintain constant pH. Sodium chloride maintains the osmotic balance. Malachite green inhibits many gram-positive bacteria, while selectively enrich *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 Vasiliadis Salmonella Enrichment Broth (DM2491H) can be further subcultured and isolated on Brilliant Green Agar (DM1016) or Deoxycholate Citrate Agar (DM1065), Xylose Lysine Deoxycholate Agar (DM1031H).

Directions

Label the ready to use LQ1104H bottle. Inoculate the sample and Incubate at specified temperature and time.

Quality Control

Appearance
Sterile clear Rappaport Vassiliadis Salmonella Enrichment Broth in bottles.
Colour
Bluish green coloured solution.
Quantity of medium
10 ml of medium in bottles.
Reaction
5.00- 5.40
Sterilization Method
Sterilized by autoclaving at 115 °C as per validated cycle
Sterility Assurance Level
Sterility assurance level of media was validated against B.subtilis Spore strips. The spore strips exposed at 115°C and unexposed strips were inoculated seperately in 100ml Soyabean Casein Digest Medium and incubated at 35°C for 7 days.

Exposed spore strips
No growth observed
Unexposed spore strips
Luxuriant growth observed
Cultural Response
Cultural characteristics observed after incubation at 30-35°C for18-24 hours. Recovery is carried out using XLD Agar(DM1031).

Sterility test
Passes release criteria

Organism	Growth	Inoculum(CFU)	Recovery	Colour of colony
Cultural response				
Salmonella Enteritidis ATCC 13076	luxuriant	50-100	>=50%	Red with black centre
Salmonella Abony NCTC 6017	luxuriant	50-100	>=50%	red with black centre
Staphylococcus aureus ATCC 6538	inhibited	>=10^3	<=0%	-
Staphylococcus aureus ATCC 25923	inhibited	>=10^3	<=0%	-
Escherichia coli ATCC 25922	none-poor	50-100	0 -10%	yellow
Escherichia coli ATCC 8739	none-poor	50-100	0 -10%	yellow
Salmonella Typhi ATCC 6539	luxuriant	50-100	>=50%	red with black centre
Salmonella Typhimurium ATCC 14028	luxuriant	50-100	>=50%	red with black centre
Salmonella Paratyphi B ATCC 8759	luxuriant	50-100	>=50%	red with black centre

Storage and Shelf Life

Store between 15-25°C. Use before expiry date on the label.

Further Reading

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, 2009, The United States Pharmacopeial Convention. Rockville, MD. 4.,,British Pharmacopoeia, 2009, The Stationery office British Pharmacopoeia 5.,,European Pharmacopoeia, 2009, 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

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