

Technical Information

Rappaport Vassiliadis Medium

Product Code: DM 1880

Application: - Rappaport Vassiliadis Medium is recommended for enrichment of *Salmonellae* based on its ability to multiply selectively at high osmotic pressure, low pH and 43°C, with modest nutritional requirements.

Composition**

Ingredients	Gms / Litre
Papaic digest of soyabean meal	4.500
Sodium chloride	7.200
Monopotassium phosphate	1.440
Magnesium chloride	36.000
Malachite green	0.036
Final pH (at 25°C)	5.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Salmonella generally survive at little high osmotic pressure, grow at slightly low pH and are resistant to malachite green compared to other bacteria.

Present medium is a modification of the Rappaport Vassiliadis Enrichment Broth described by Van Schothorst and Renauld ^(1, 2). They recommended this media for the selective enrichment of *Salmonellae* from food and environmental specimens. Addition of magnesium chloride to the medium was reported by Peterz et al ⁽³⁾. *Salmonella* species can be isolated from human faeces without pre-enrichment by using this medium.

The medium contains papaic digest of soyabean meal 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. Potassium phosphate buffers the medium to maintain the constant pH. Sodium chloride maintains the osmotic balance.

Methodology

Suspend 49.17 grams of powder media in 1000 ml distilled water. Shake well & heat if necessary to dissolve the medium completely. Dispense as desired into tubes and sterilize by autoclaving at 10 lbs pressure (115°C) for 15 minutes.

Quality Control

Physical Appearance

Light yellow to light blue homogeneous free flowing powder

Colour and Clarity of prepared medium

Bluish green coloured, clear to slightly opalescent solution with slight precipitate

Reaction

Reaction of 4.92% w/v aqueous solution at 25°C. pH : 5.2±0.2

pH Range:-

5.00-5.40

Cultural Response/Characteristics

DM 1880: Cultural characteristics observed after an incubation at 42-43°C for 18-24 hours. After incubation, subculture on selective agar media like MacConkey Agar (DM1081) or XLD Agar (DM1031) and incubate at 35-37°C for 18-24 hours.



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony on M081
<i>Escherichia coli</i> ATCC 25922	50-100	none-poor	<=10%	pink-red
<i>Salmonella Enteritidis</i> ATCC 13076	50-100	good-luxuriant	>=50%	colourless
<i>Salmonella Typhi</i> ATCC 6539	50-100	good-luxuriant	>=50%	colourless
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	good-luxuriant	>=50%	colourless

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

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. Peterz M., Wiberg C. and Norberg P., 1989, J. Appl. Bact., 66:523.

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Replace date 08-July-2026



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