TM 2302 – RAPPAPORT VASSILIADIS R10 MEDIUM

INTENDED USE

For selectively enriching *Salmonella* species from meat and dairy products, faeces and sewage polluted water.

PRODUCT SUMMARY AND EXPLANATION

Rappaport Vassiliadis R10 Medium is a selective enrichment medium that is used following pre-enrichment of the specimen in a suitable pre-enrichment medium. It has gained approval for use in analyzing milk and milk products, raw flesh foods, highly contaminated foods and animal feeds. Rappaport et al formulated an enrichment medium for *Salmonella* that was modified by Vassiliadis et al. The Vassiliadis modification, designated R10/43°C, had a reduced level of malachite green and recommended incubation at 43°C. Later work by Peterz showed that incubation at 41.5 ± 0.5°C for 24 hours improved recovery of Salmonella species. Rappaport Vassiliadis R10 medium selectively enriches for salmonellae because bacteria, including other intestinal bacteria, are typically resistant to or inhibited by malachite green, high osmotic pressure and/or low pH. *S. Typhi* and *S. Choleraesuis* are sensitive to malachite green and may be inhibited.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	4.540
Sodium chloride	7.200
Potassium dihydrogen phosphate	1.450
Magnesium chloride	13.400
Malachite green oxalate	0.036

PRINCIPLE

This medium consists of 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.

INSTRUCTION FOR USE

- Dissolve 26.62 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

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 that may have precipitate

pH (at 25°C) : 5.1 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation. After incubation, subculture on selective agar media like MacConkey Agar or XLD Agar and incubate at 35-37°C for 18-24 hours.

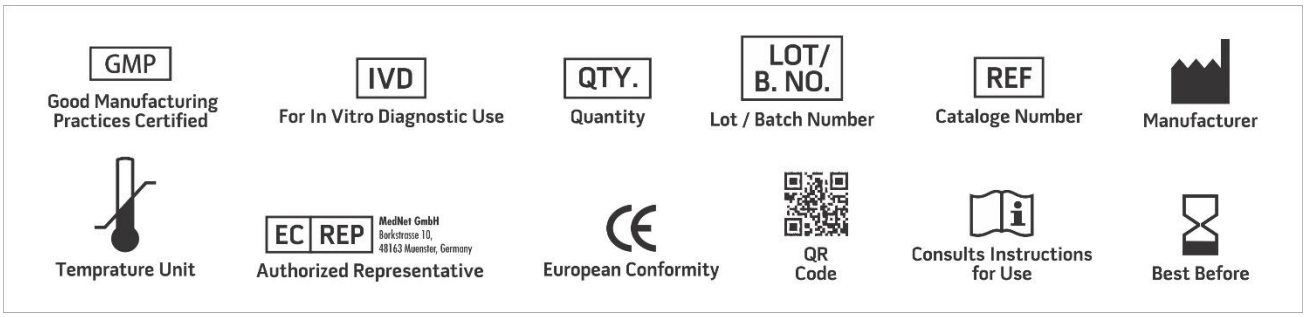
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of Colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	None-poor	0-10%	Pink red	42 - 43°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Good-luxuriant	>=50%	Colourless	42 - 43°C	18-24 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	>=50%	Colourless	42 - 43°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Good-luxuriant	>=50%	Colourless	42 - 43°C	18-24 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. Horwitz, (Ed.), 2000, Official Methods of Analysis of AOAC International, 17th Ed., AOAC International, Gaithersburg, Md.
2. International Dairy Federation, 1995, Milk and Milk Products: Detection of Salmonella, IDF Standard 93B:1005. Brussels, Belgium.
3. Peterz M., Wiberg C. and Norberg P., 1989, J. Appl. Bacteriol., 66,523-528.
4. Rappaport F., Konforti N. and Navon B., 1956, J. Clin. Pathol., 9, 261-266
5. Vassiliadis P., Trichopoulos D., Kalandidi A. and Xirouchaki E., 1978, J. Appl. Bacteriol., 44:233.



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

***For Lab Use Only**

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