MRSV – MODIFIED SEMISOLID RAPPAPORT VASSILIADIS MEDIUM (ISO 6579)

CAT Nº: 1376

For the detection of motile *Salmonella* species from food and environment samples

FORMULA IN g/l

Magnesium Chloride (anhydrous)	10.93	Potassium Dihydrogen Phosphate	1.47
Sodium Chloride	7.34	Malachite Green Oxalate	0.037
Tryptose	4.59	Novobiocin	0.01
Acid Casein Peptone	4.59	Bacteriological Agar	2.7

Final pH 5.2 ± 0.2 at 25ºC

PREPARATION

Suspend 31.6 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. AVOID OVERHEATING. DO NOT AUTOCLAVE. Dispense into Petri plates. The prepared medium should be stored at 2-8°C. The color is blue.

The dehydrated medium should be homogeneous, free-flowing and beige in color If there are any physical changes, discard the medium.

USES

MSRV-MODIFIED SEMISOLID RAPPAPORT VASSILIADIS MEDIUM is a selective medium used for the rapid detection of motile *Salmonella spp*.

Is a modification of Rappaport Vassiliadis enrichment broth for detecting motile *Salmonella spp* in feces, food products and environmental samples. In this medium the main detection is based on the motility and ability of *Salmonella* to migrate through selective medium ahead of competing motile microorganism, therefore producing opaque halos of growth.

The mobility of other microorganisms is inhibited by selective mediums (such as Magnesium Chloride, Malachite Green Oxalate and Novobiocin) as well as by the temperature of incubation at 42°C.

Tryptose and Acid casein peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Magnesium chloride and Malachite Green Oxalate are inhibitory to organisms other than *Salmonella spp*. Novobiocin is a selective agent that inhibits Gram positive bacteria and avoids the development of *Proteus*.

This medium is not suitable for the detection of non motile strains of *Salmonell*a whose of which their presence is very low (≤ 1 %).

After incubation 20 hours at 37°C, on a Buffered Peptone Water transfer three drops on a MRSV Petri dish. Incubate at 42 ± 0.2°C for 16 ± 0.5 hours.

After incubation check the MRSV dishes for migration halos: motile *Salmonella* show a halo of growth around the original point of inoculation

It is recommended to conduct serological and biochemical tests for *Salmonella* species confirmation.

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 42± 0.5ºC and observed after 16±0.5 hours

Microorganisms	Growth	Motility
Salmonella typhimurium ATCC 14028	Good	+
Salmonella enteritidis ATCC 13076	Good	+
Citrobacter freundii ATCC 8090	Inhibited or partially inhibited	-

BIBLIOGRAPHY

De SMEDT et al.; Rapid Salmonella Detection in Foods by Motility Enrichment on a Modified Semi-Solid Rappaport-Vassiliadis Medium. J. Food Protect. VOl. 49, 7; 510-514 (1986)

De SMEDT, a. BOLDERDIJK, R.F.; Dynamics of Salmonella Isolation with Modified Semi-Solid Rappaport-Vassiliadis Medium. J. Food Protect. Vol. 50, 8; 658-661 (1987)

STORAGE

Once opened keep powdered medium closed to avoid hydration.