TM 1127– SEMISOLID RAPPAPORT VASSILIADIS MEDIUM, MODIFIED

INTENDED USE

For detection of motile *Salmonella* species from food, faeces and environmental specimens.

SUMMARY AND EXPLANATION

Semisolid Rappaport Vassiliadis Medium, Modified is made according to the De Smedt et al. formulation for the identification of motile *Salmonella* species in food and environmental samples. Compared to routinely used enrichment techniques, this medium identifies more Salmonella positive samples.

COMPOSITION

Ingredients	Gms / Ltr
Potassium Dihydrogen phosphate	1.470
Tryptose	4.590
Tryptone	4.590
Sodium chloride	7.340
Magnesium chloride, anhydrous	10.930
Malachite green oxalate	0.037
Agar	2.700

PRINCIPLE

Nitrogenous and carbonaceous elements, as well as other necessary growth nutrients, are provided by tryptose and tryptone. Phosphate provides the medium a strong buffering capacity. Malachite green oxalate and Novobiocin inhibits the growth of many gram positive bacteria. The capacity of *Salmonella* species to move through the selective medium by competing with other motile organisms, resulting in opaque halos of growth, is the basis for the medium's operation. For *Salmonella* species isolation from faeces, this medium can be utilized in combination with direct culture and Selenite F Broth enrichment, and subculturing on XLD Agar or Mannitol Lysine Agar resulted in better recovery rates. This medium is not suitable for the detection of non-motile strains of Salmonella.

Inoculate 3 drops (0.1 ml) of pre-enrichment culture (16-20 hours old) over the air-dried medium surface in separate spots. Incubate the plates at 42°C for up to 24 hours in an upright posture. The motile bacteria will form a halo or growth zone around the inoculation site. *Salmonella* species have colonies that are straw coloured. Sub-cultures can be carried out from the outside edge of the halo to confirm purity and for further biochemical and serological tests.

INSTRUCTION FOR USE

- Dissolve 31.66 grams in 1000 ml purified/ distilled water.
- Gently heat the medium just to boiling. Do not autoclave.
- Cool to 45-50°C and just before use aseptically add rehydrated contents of 1 vial of Novobiocin Selective Supplement or 3 vials of Novobiocin supplement solution.
- Mix well and pour into sterile petri dishes. Air dry the plate for at least 1 hour at room temperature.

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 semisolid gel forms in petri dishes which may have precipitated.
pH (at 25°C) : 5.2 ± 0.2

INTERPRETATION

Cultural characteristics observed after an incubation with added Novobiocin Selective Supplement or Novobiocin supplement.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Motility	Recovery	Incubation Temperature	Incubation Period
Salmonella Enteritidis	13076	50-100	Good-luxuriant	Good Migration	>=50 %	40.5-42.5°C	21-27 Hours
Escherichia coli	25922	50-100	None-poor	Suppressed Migration	0-10%	40.5-42.5°C	21-27 Hours
Citrobacter freundii	8090	50-100	None-poor	Suppressed Migration	0-10%	40.5-42.5°C	21-27 Hours
Salmonella Typhimurium	14028	50-100	Good-luxuriant	Good Migration	>=50 %	40.5-42.5°C	21-27 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	Good Migration	>=50 %	40.5-42.5°C	21-27 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 10-25°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.

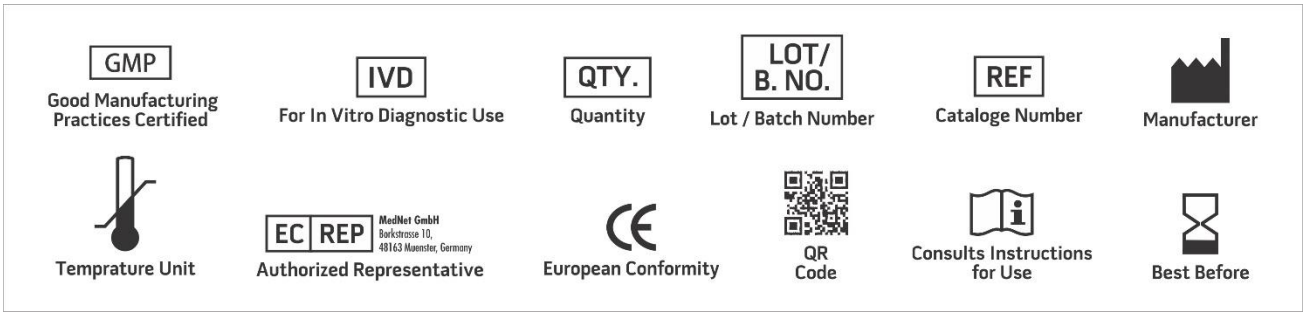
DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Aspinall S.T., Hindle M.A. and Hutchinson D.N., 1992, Europ. J. Clin. Microbiol. Inf. Dis., 11:936.
2. De Smedt J.M., Balderdijk R., Rappold H. and Lautenschlaeger D., 1986, J. Food Prot., 49:510.

3. De Smedt J.M., Balderdijk R., 1987, J. Food Prof., 50:658.
4. De Zutter L. et al, 1991, Int. J. Food Microbiol., 13:11.
5. De Smedt J.M. et al, 1991, Int. J. Food Microbiol., 13:301.
6. Holbrook R. et al, 1989, Lett. Appl. Microbiol., 8:139.



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

***For Lab Use Only**

Revision: 16 June., 2023