

## CM 21493 – RAPPAPORT VASSILIADIS SOYABEAN MEAL BROTH (ISO 6579-1:2017)

### INTENDED USE

Recommended as selective enrichment medium for the isolation of Salmonella species.

### PRODUCT SUMMARY AND EXPLANATION

Rappaport Vassiliadis Soyabean Meal Broth (RVSM) is as per the specification laid down in ISO 6579:2002 for the selective enrichment medium for isolation of Salmonella. Rappaport Vassiliadis Soyabean Meal Broth (RVSM) is modification of the Rappaport Vassiliadis Enrichment Broth, revised by van Schothorst. Van Schothorst modified the original formula by addition of dipotassium hydrogen phosphate to buffer the medium and addition of magnesium chloride to enhance the reliability of enrichment broth. Peterz et al have also emphasized the importance of the concentration of magnesium chloride in the final medium.

### COMPOSITION

| Ingredients                     | Gms / Ltr |
|---------------------------------|-----------|
| Soya peptone                    | 4.500     |
| Sodium chloride                 | 7.200     |
| Potassium dihydrogen phosphate  | 1.400     |
| Dipotassium hydrogen phosphate  | 0.200     |
| Magnesium chloride, hexahydrate | 28.600    |
| Malachite green , oxalate       | 0.036     |

### PRINCIPLE

The medium consists of soya peptone 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. Phosphates buffer the medium to maintain the constant pH. Sodium chloride maintains the osmotic balance.

### INSTRUCTION FOR USE

Dissolve 26.58 grams in 1000 ml distilled water.

Heat gently if necessary to dissolve the medium completely.

Dispense into tubes or flasks as desired and sterilize by autoclaving at 10 psi pressure (115°C) for 15 minutes.

### QUALITY CONTROL SPECIFICATIONS

|                               |                                                              |
|-------------------------------|--------------------------------------------------------------|
| Appearance of Powder          | :Light yellow to light blue homogeneous free flowing powder. |
| Appearance of prepared medium | :Blue coloured clear solution without any precipitate.       |
| pH (at 25°C)                  | :5.2±0.2                                                     |

### INTERPRETATION

Cultural characteristics observed after incubation.



| Microorganism          | ATCC  | Inoculum (CFU/ml) | Growth at 40-42°C | Recovery 40-42°C | Growth at 35-37°C | Incubation Period |
|------------------------|-------|-------------------|-------------------|------------------|-------------------|-------------------|
| Escherichia coli       | 25922 | 50-100            | Fair              | 20-30%           | Poor              | 18 - 24 Hours     |
| Salmonella Paratyphi B | 8759  | 50-100            | Good              | 40-50%           | Good              | 18 - 24 Hours     |
| Salmonella Typhi       | 6539  | 50-100            | Fair-good         | 20-40%           | Fair              | 18 - 24 Hours     |
| Salmonella Typhimurium | 14028 | 50-100            | Good-luxuriant    | >=50%            | Good-luxuriant    | 18 - 24 Hours     |

#### PACKAGING:

In pack size of 100 gm and 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. Microbiology of food and animal feeding stuffs-Horizontal method for the detection of Salmonella spp, International Organization for Standardization (ISO), 6579:2002.
2. Rappaport F., Konforti N. and Navon B., 1956, J. Clin. Pathol., 9, 261-266
3. Van Schothorst M., Renauld A. and VanBeek C., 1987, Food Microbiol., 4:11-18.
4. Van Schothorst M. and Renauld A., 1983, J. Appl. Bacteriol., 54:209-215.
5. Peterz M., Wiberg C. and Norberg P., 1989, J. Appl. Bacteriol., 66, 523-528.

