

Product Data Sheet

FLUID TETRATHIONATE MEDIUM W/O IODINE AND BG (TETRATHIONATE BROTH BASE W/O IODINE & BG) (VEG.)

Product No. GB-DCM-00219-1A

INTENDED USE

For isolation of salmonellae from food, urine, faeces and other material of sanitary importance.

PRODUCT SUMMARY

Fluid Tetrathionate Medium (Veg) is prepared by completely replacing animal based peptones by vegetable peptones which makes the medium free of BSE/TSE risks. Veg substitutes, Veg hydrolysate and Veg peptone are used in this medium. Tetrathionate Broth Base (Veg) is the modification of Tetrathionate Broth Base which was originally described by Mueller. He found that the medium selectively inhibited coliforms and permitted unrestricted growth of enteric pathogens.

Product Specifications

| Ingredients | Gms / Ltr |
|---------------------|------------------|
| Veg hydrolysate | 2.500 |
| Veg peptone | 2.500 |
| Synthetic detergent | 1.000 |
| Calcium carbonate | 10.000 |
| Sodium thiosulphate | 30.000 |

PRINCIPLE

The medium consists of Tryptone and Veg peptone are the sources of carbon, nitrogen, vitamins and minerals. Synthetic detergent and Brilliant green inhibit accompanying gram-positive microorganisms. The selectivity depends on the ability of thiosulphate and tetrathionate in combination to suppress commensal coliform organism. Calcium carbonate neutralizes the acidic tetrathionate decomposition products. Organisms producing the enzyme tetrathionate reductase e.g. Salmonella species proliferates in the medium. Tetrathionate is produced from thiosulphate after addition of iodine solution.

INSTRUCTION FOR USE

- Dissolve 46.0 grams in 1000 ml distilled water and heat just to boiling. **DO NOT AUTOCLAVE.**
 - Cool below 45°C and add 20 ml iodine solution (iodine - 6 grams and potassium iodide - 5 grams in 20 ml distilled water) and 10 ml of 0.1% brilliant green solution.
 - Mix well and dispense in 10 ml quantities. This complete medium should be used on the day of preparation otherwise sterilized broth base may be stored at 2-8°C for some time. Do not heat after the addition of iodine solution. Use the medium immediately after addition of iodine.
- Note: Due to presence of calcium carbonate, the prepared medium forms opalescent solution with a white precipitate.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Colour of colony | Incubation Temperature | Incubation Period |
|--|-------|-------------------|----------------|------------------|------------------------|-------------------|
| Salmonella Typhimurium | 14028 | 50-100 | Good-luxuriant | Colourless | 35-37°C | 18-24 Hours |
| Salmonella enterica subsp. enterica serovar Choleraesuis | 12011 | 50-100 | Good-luxuriant | Colourless | 35-37°C | 18-24 Hours |
| Escherichia coli | 8739 | 50-100 | Good-luxuriant | Colourless | 35-37°C | 18-24 Hours |
| Escherichia coli | 25922 | 50-100 | Fair-good | Pink - red | 35-37°C | 18-24 Hours |
| Salmonella serotype Enteritidis | 13076 | 50-100 | Good-luxuriant | Colourless | 35-37°C | 18-24 Hours |



QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Cream coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Appearance of prepared medium: Complete medium with added Brilliant Green solution and Iodine solution is light green, opalescent with heavy white precipitate. On standing this precipitates settles down.

pH (at 25°C) : 7.0±0.2

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.

This product is for research use only.