

## TM 2364 – TETRATHIONATE BRILLIANT GREEN BILE BROTH

### INTENDED USE

For isolation and identification of Salmonellae.

### PRODUCT SUMMARY AND EXPLANATION

*Salmonella* are gram-negative, facultatively anaerobic, non-sporulating, non-motile rods in the family *Enterobacteriaceae*. They are widely distributed in animals affecting mainly the stomach and the intestines. These organisms are difficult to differentiate biochemically from *Escherichia coli*. Tetrathionate Broth was originally described by Mueller and later modified by Kauffman. Tetrathionate Brilliant Green Bile Broth is used as an enrichment medium for *Salmonella*. Enrichment broth is usually recommended to facilitate the recovery of small numbers of *Salmonella* species. Tetrathionate Brilliant Green Bile Broth is also mentioned in I.P. for isolation and identification of *Salmonella* species from foods, water and other materials of sanitary importance. After incubation, streak the culture from Tetrathionate Brilliant Green Bile Broth onto differential medium for isolation and identification. Tetrathionate Brilliant Green Bile Broth is not suitable for growth of *Salmonella* Typhi and *Salmonella* Paratyphi.

### COMPOSITION

Ingredients	Gms / Ltr
Peptone	8.600
Bile	8.000
Sodium chloride	6.400
Calcium carbonate	20.000
Potassium tetrathionate	20.000
Brilliant green	0.070

### PRINCIPLE

Peptone in the medium provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and nutrients for growth of Salmonellae. Brilliant green and bile inhibit both gram-positive as well as some selected gram-negative organisms. Potassium tetrathionate inhibits normal flora of faecal specimens. Sodium chloride helps in maintaining osmotic equilibrium.

### INSTRUCTION FOR USE

- Suspend 63.07 grams in 1000 ml purified / distilled water.
- Heat just to boiling. DO NOT AUTOCLAVE OR REHEAT.
- Dispense into sterile tubes or flasks as desired.

Note: Due to the presence of calcium carbonate, the prepared medium forms opalescent solution with white precipitate.

### QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to pale green homogeneous free flowing powder.
Appearance of prepared medium	: Bluish green coloured opalescent solution with white precipitate.
pH (at 25°C)	: 7.0±0.2

### INTERPRETATION

Cultural characteristics when subcultured on MacConkey Agar and observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Fair	20-30%	Pink to red with bile precipitate	35-37°C	18-24 Hours
<i>Salmonella Typhi</i>	6539	50-100	Luxuriant	>=70%	Colourless	35-37°C	18-24 Hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	>=70%	Colourless	35-37°C	18-24 Hours
<i>Salmonella Enteritidis</i>	13076	50-100	Luxuriant	>=70%	Colourless	35-37°C	18-24 Hours
<i>Staphylococcus aureus subsp. aureus</i>	25923	>=10 <sup>4</sup>	Inhibited	0%	-	35-37°C	18-24 Hours
<i>Staphylococcus aureus subsp. aureus</i>	6538	>=10 <sup>4</sup>	Inhibited	0%	-	35-37°C	18-24 Hours
<i>Escherichia coli</i>	8739	50-100	Fair	20-30%	Pink to red with bile precipitate	35-37°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. Indian Pharmacopoeia, 1996, Ministry of Health and Family Welfare, Govt. of India.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Kauffman F., 1930, Hyg. Abt. I. Orig., 113, 148.
5. Kauffman F., 1935, Z. Hyg. Infektionskr., 117, 26.
6. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
7. Mueller L., 1923, C. R. Soc. Biol., (Paris), 89, 434.
8. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Ed.). 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Buckstrasse 10 48163 Muenster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

**\*For Lab Use Only**  
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