

TECHNICAL DATA SHEET

Tetrathionate Brilliant Green Bile Broth

Principle

Tetrathionate Brilliant Green Bile Broth is used for isolation of enteric pathogens and inhibit growth of coliforms. The media is composed of peptone, sodium chloride, bile, calcium carbonate, potassium tetrathionate, and brilliant green. Peptone provides nitrogen, carbon source, vitamins and nutrients essential for the growth of microorganism. Sodium chloride maintains osmotic equilibrium. Bile and brilliant green inhibit the growth of the majority of Gram-negative and Gram-positive, bacteria. Potassium tetrathionate inhibits faecal microflora. Calcium carbonate neutralizes the acidic biproducts of tetrathionate decomposition.

Use: For isolation and identification of Salmonellae.

Contents*

Ingredients	Gram/Liter
Peptone	8.600
Sodium chloride	6.400
Ox Bile	8.000
Calcium Carbonate	20.000
Potassium tetrathionate	20.000
Brilliant green	0.070
pH at 25°C	7.0 ± 0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 63.07 gram in 1000 ml distilled water. Heat just too boiling. Do Not Autoclave or Overheat. Cool below 45-50°C, and distribute aseptically in sterile test tubes or as desired and inoculate test sample aseptically.

Specimens types analyzed

Clinical and biological samples etc.

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Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige with green ting colored free flowing, homogeneous powder
Reaction of 6.30% solution	7.0 ± 0.2 at 25°C
pH	6.80 – 7.20
Color and clarity of ready medium	Light green opalescent with white precipitate, on standing the precipitate settles down
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-48 hours
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-24 hours
Negative control	Performed using sterile distilled water

Different Microbial Response

Prepare medium as per label directions, Cultural characteristics observed at 35 ± 2°C for 18-24 hours. Inoculum 50-100 CFU. After incubation sub cultured on Xylose Lysine Deoxycholate Agar (RDM-XLDA01) at 35 ± 2°C for 18-72 hours.

Organism	ATCC	Growth	Recovery	Colony Color
<i>Salmonella typhimurium</i>	14028	Luxuriant	≥ 80%	Red with black centered
<i>Salmonella enteritidis</i>	13076	Luxuriant	≥ 80%	Red with black centers
<i>Salmonella abony</i>	NCTC-6017	Luxuriant	≥ 80%	Red with black centers
<i>Escherichia coli</i>	8739	Poor	≥ 20%	Yellow
<i>Staphylococcus aureus</i>	25923	Inhibited	--	--

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. *The Indian Pharmacopoeia* (1996), Vol. II.
4. Downes F P and Ito K(Eds.), (2001), *Compendium of Methods For The Microbiological Examination of Foods*, 4th Ed., APHA, Washington, D.C.

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