Tetrathionate Brilliant Green Bile Broth

Intended Use
Tetrathionate Brilliant Green Bile Broth is used for isolation and identification of *Salmonella*.

Summary
This medium is useful for inhibiting the growth of competing microflora while promoting the growth of target species. Tetrathionate Brilliant Green Bile Broth is also mentioned in IP for isolation and identification of *Salmonella* species from foods, water and other materials of sanitary importance.

Principle
Peptic digest of animal tissue (Peptone) supply nutrients, nitrogen compounds and amino acids. Ox bile supports the growth of enteric bacteria and inhibits other bacteria, which do not normally live in the intestine. Brilliant-green specifically inhibits the Gram-positive accompanying flora. Potassium tetrathionate inhibits normal flora of faecal specimens. Sodium chloride provides sodium ions for the membrane transport and maintains osmotic equilibrium of the medium. The Calcium carbonate is a neutralizer that will absorb any toxic metabolites.

Formula*

Ingredients	**g/L**
Peptic Digest of Animal Tissue	8.6
Potassium Tetrathionate	20.0
Brilliant Green	0.07
Dehydrated Ox Bile	8.0
Sodium Chloride	6.4
Calcium carbonate	20.0
Final pH (at 25°C)	7.0 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Pharmaceutical sample; Food and dairy samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend the 63.07 g of powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Heat with frequent agitation to dissolve the powder completely. Do not boil, DO NOT AUTOCLAVE OR REHEAT.
4. Pour into adequate containers homogenizing the medium well enough to distribute the calcium carbonate.

Quality Control
Dehydrated Appearance: Greenish yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Bluish green coloured, opalescent solution with white precipitate.
Cultural Response: Cultural characteristics observed after an incubation of 18-24 hours at 30°C-35°C and subsequent recovery on MacConkey Agar for 18-72 hours at 30°C-35°C.

Organism (ATCC)	Growth	Colour of Colony
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (14028)	Good	Colourless
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (23564)	Good	Colourless
Salmonella Enteritidis (13076)	Good	Colourless
Shigella flexneri serotype 2b (12022)	Good	Colourless
Staphylococcus aureus subsp. *aureus* (25923)	Inhibited	-
Staphylococcus aureus subsp. *aureus* (6538)	Inhibited	-
Escherichia coli (25922)	Partial Inhibition	Pink with bile precipitate
Escherichia coli (8739)	Partial Inhibition	Pink with bile precipitate

Interpretation of Results

1. Place one to two drops of the incubated broth onto selective plated media (Deoxycholate Citrate Agar, XLD Agar and Brilliant Green Agar) for *Salmonella* spp. and streak for isolated colonies.
2. Incubate aerobically at 30ºC-35ºC for 18-48 hours and observe the results.
3. Deoxycholate Citrate Agar: Colourless colonies, XLD Agar: Red colonies with black center, Brilliant Green Agar: Small, transparent, colourless or pink or opaque-white colonies.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. IP, 1996, Ministry of Health and Family Welfare, Govt. of India, Vol. 2.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201200080100	Dehydrated Culture Media	100 g
201200080500	Dehydrated Culture Media	500 g