



# Technical Data

## Broth Medium I (Tetrathionate Bile Brilliant Green Broth)

ME1255

Tetrathionate Bile Brilliant Green Broth (Broth Medium I) is used for isolation and identification of *Salmonellae* in accordance with European Pharmacopoeia, 2008.

### Composition\*\*

Ingredients	Gms / Litre
Peptone	8.600
Ox-bile dried	8.000
Sodium chloride	6.400
Calcium carbonate	20.000
Potassium tetrathionate	20.000
Brilliant green	0.070
pH after heating	7.0±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 63.07 grams in 1000 ml purified/ distilled water. Heat just to boiling. DO NOT AUTOCLAVE OR REHEAT. Dispense as desired.

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

### Principle And Interpretation

Tetrathionate Brilliant Green Bile Broth cited as Broth Medium I and is formulated as per the recommendation of European Pharmacopoeia (1) It is recommended for isolation and identification of *Salmonella* species in the tests prescribed for sterility checking in the Pharmacopoeia. It is employed to detect *Salmonella* from pharmaceutical, foods, water and other materials of sanitary importance.

Peptone provides nitrogenous nutrients to the *Salmonellae* . Brilliant green and ox-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. Calcium carbonate neutralizes the acids produced by reduction of tetrathionate.

Medium is not suitable for growth of *Salmonella* Typhi and *Salmonella* Paratyphi (2).After incubation streak onto two of any of the selective like Agar Medium J, Agar Medium K, or Agar Medium L. Incubate at 35-37°C for 18-72 hours and observe for typical colony appearance and characteristics(1).

### Quality Control

#### Appearance

Light yellow to greenish yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Bluish green opalescent solution with white precipitate

#### pH

6.80-7.20

#### Cultural Response

ME1255: Cultural characteristics observed after enrichment in Broth Medium I at 41-43°C for 18-24 hours, and then subcultured on Agar Medium K (Xylose Lysine Deoxycholate Agar),(ME031) and Agar Medium L (Brilliant Green, Phenol red, lactose monohydrate Sucrose Agar), (ME016) and incubated at 35-37°C for 18-72 hours.

Organism	Inoculum (CFU)	Growth	Observed Lot Recovery value (CFU)	Recovery	Colour of Colony	Incubation period
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Please refer disclaimer Overleaf.

**Growth on Agar Medium****K**

<i>Salmonella Typhimurium</i> ATCC 14028	50 -100	luxuriant	25 -100	>=50 %	red with black centres	18 -72 hrs
<i>Salmonella Abony</i> NCTC 6017	50 -100	good-luxuriant	25 -100	>=50 %	red with black centres	18 -72 hrs

**Additional Microbiological Testing****Growth on Agar Medium K**

<i>Salmonella Enteritidis</i> ATCC 50-100 13076		luxuriant	25 -100	>=50 %	red with black centres	18 -72 hrs
<i>Staphylococcus aureus</i> ATCC 6538	>=10 <sup>3</sup>	inhibited	0	0%		>=72 hrs
<i>Escherichia coli</i> ATCC 8739	50 -100	fair	10 -30	20 -30 %	yellow	18 -72 hrs

**Growth on Agar Medium****L**

<i>Salmonella Typhimurium</i> ATCC 14028	50 -100	luxuriant	25 -100	>=50 %	pinkish white	18 -24 hrs
<i>Salmonella Abony</i> NCTC 6017	50 -100	luxuriant	25 -100	>=50 %	pinkish white	18 -24 hrs

**Additional Microbiological Testing****Growth on Agar Medium L**

<i>Salmonella Enteritidis</i> ATCC 50-100 13076		luxuriant	25 -100	>=50 %	pinkish white	18 -24 hrs
<i>Staphylococcus aureus</i> ATCC 6538	>=10 <sup>3</sup>	inhibited	0	0%		>=24 hrs
<i>Escherichia coli</i> ATCC 8739	50 -100	fair	10 -30	20 -30 %	yellow	18 -24 hrs

**Storage and Shelf Life**

Store below 30°C in tightly closed container. Use before expiry period on the label

**Reference**

1. European Pharmacopoeia, 2008, European Dept. for the Quality of Medicines.
2. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

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