Technical Data Sheet

Tetrathionate-Brilliant-Green (TBG) Bile Enrichment Broth, modified for microbiology

Ordering number: 1.05178.0500

Tetrathionate-brilliant-green (TBG) bile enrichment broth is used for the selective enrichment of Salmonella for the examination of pharmaceutical products in raw materials as well as foodstuffs, meat etc.

The medium complies with the recommendations of the APHA for the examination of food (1992).

Mode of Action

Brilliant green, ox bile and high concentrations of thiosulfate and citrate largely inhibit the accompanying microbial flora. Sulfide production is detected by using thiosulfate and iron ions, the colonies turn black. The presence of coliform bacteria is established by detecting degradation of lactose to acid with the pH indicator neutral red.

Typical Composition (g/l)

Peptones	10 g/l
Lactose	10 g/l
Ox Bile	8.5 g/l
Sodium Citrate	10 g/l
Na2S2O3	8.5 g/l
Ammonium Iron(III) Citrate	1.0 g/l
Brilliant Green	0.0003 g/l
Neutral Red	0.025 g/l
Agar-Agar	12 g/l

Preparation

Suspend 60 g/l completely. Pour plates. **Do not autoclave**.

The appearance of the plates is turbid with sediment and green.

The pH value at 25 °C is in the range of 6.8-7.2.

Specimen

e.g. Stool,

Clinical specimen collection, handling and processing, see general instructions of use.

Experimental Procedure and Evaluation

Spread the sample or material from an enrichment culture on the surface of the culture medium. Incubation 24 h at 35 °C aerobically.

Lactose-negative colonies are colorless. Lactose-positive colonies are pink to red. Colonies of microorganisms producing H2S have a black center.

Appearance of Colonies	**Microorganisms**
Colourless, translucent	*Shigella* and some *Salmonella* species
Translucent with a black centre	*Proteus* and most *Salmonella* species
Pink to red	*Escherichia coli*
Colonies are larger than those of *Escherichia coli,* pink to whitish or cream-coloured, opaque, mucoid	*Enterobacter aerogenes*

Storage

The product can be used for sampling until the expiry date if stored upright, protected from light and properly sealed at +15 °C to +25 °C.

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 to +25° C.

Disposal

Please mind the respective regulations for the disposal of used culture medium (e.g. autoclave for 20 min at 121 °C, disinfect, incinerate etc.).

Quality Control

Control Strains	**ATCC #**	**Inoculum CFU**	**Incubation**	**Expected Results**
Salmonella typhimurium	14028	10-100	24 h at 35 °C	Enrichment from mixed inoculum ≥ 95 %, growth
Escherichia coli	25922	≥ 10^4	24 h at 35 °C	Enrichment from mixed inoculum ≤ 5 %, growth inhibited

Please refer to the actual batch related Certificate of Analysis.

Literature

American Public Health Association (1992). Compendium of methods for the microbiological examination of foods. 3rd edition.

Deutsches Arzneibuch (DAB), 10. Auflage, Kapitel VIII, 10. European Pharmacopeia II (2003). Chapter VIII, 10.

Jeffries, L. (1959). Novobiocin-tetrathionate broth: A medium of improved selectivity for the isolation of

salmonellae from faeces. J. Clin. Path., **12**: 568-571.

Ordering Information

Product	Cat. No.	Pack size
TBG-Broth modified for microbiology (Tetra- thionate-Brilliant-green Bile Enrichment Broth)	1.05178.0500	500 g
BPLS Agar for the isolation of Salmonella	1.07237.0500	500 g
Lactose broth for microbiology	1.07661.0500	500 g
LEIFSON Agar (Deoxycholate citrate agar acc. to LEIFSON, modified for microbiology)	1.02896.0500	500 g
XLD Agar (acc. harm. EP/USP/JP)	1.05290.0500	500 g