

TBG-Broth (Tetrathionate-Brilliant-green Bile Enrichment Broth), modified

Selective enrichment of *Salmonella* for the examination of pharmaceutical products in raw materials as well as food-stuffs, meat etc.

Principle

Microbiological method.

General Information

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/litre)

Peptones 10.0; lactose 10.0; ox bile 8.5; sodium citrate 10.0; sodium thiosulfate 8.5; ammonium iron(III) citrate 1.0; brilliant green 0.0003; neutral red 0.025; agar-agar 12.0.

Preparation

Suspend 60 g/litre completely, pour plates.

■ Do not autoclave.

pH: 7.0 ± 0.2 at 25 °C.

The plates are clear and reddish-brown.

Storage

Usable up to the expiry date when stored dry and tightly closed at +15 to +25 °C. Protect from light.

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.

Specimen

e.g. Stool,

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

Quality control

Test strains	Inoculum	Growth 6 h	after 24 h
<i>Escherichia coli</i> ATCC 25922	approx. 99 %	≤ 30 %	≤ 5 %
<i>Salmonella typhimurium</i> ATCC 14028	approx. 1 %	≥ 70 %	≥ 95 %

Experimental Procedure and Evaluation

Spread the sample or material from an enrichment culture on the surface of the culture medium.

Incubation: 18-24 hours at 35 °C aerobically.

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

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

Literature

Deutsches Arzneibuch (DAB), 10. Auflage, Kapitel VIII, 10.

European Pharmacopeia II, Kapitel VIII, 10

JEFFRIES, L.: Novobiocin-tetrathionate broth: A medium of improved selectivity for the isolation of salmonellae from faeces. - J. Clin. Path., 12: 568-571 (1959)

Ordering Information

Product	Ordering No.	Pack size
TBG-Broth (Tetrathionate-Brilliant-green Bile Enrichment Broth), modified	1.05178.0500	500 g
BPLS Agar (USP)	1.07232.0500	500 g
Lactose Broth	1.07661.0500	500 g
LEIFSON Agar	1.02896.0500	500 g
XLD Agar	1.05287.0500	500 g