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 feces, foodstuffs, meat etc.

General Information

The broth complies with the recommendations of the German DAB 10 and the European Pharmacopeia II.

Note: for granting good functioning of the TBG-Broth, the preparation and the incubation temperature had to be modified versus the recommendations of DAB 10/EP.

Mode of Action

Bile supports the growth of enteric bacteria and inhibits bacteria, which do not normally live in the intestine.Brilliant-green specifically inhibits the Gram-positive accompanying flora. For suppressing Proteus, the pH of the medium can be adjusted to approx. 6.5. JEFFRIES (1959) reported that it is advantageous to add 0.04 g/litre novobiocin for suppressing Proteus.

Typical Composition (g/litre)

Peptone 8.6; ox-bile 8.0; sodium chloride 6.4; calcium carbonate 20.0; potassium tetrathionate 20.0; brilliant green 0.07.

Preparation

Suspend 63 g in 1 litre of demin. water, if needed short heating to a maximum of 50 °C. Any undissolved calcium carbonate should be homogenously mixed before pouring.

- Do not autoclave.
- adjust pH to a value of 7.0 ± 0.2

The preparared broth is turbid, green with white sediment.

Experimental Procecure and Evaluation

1. Sample to be enriched in Lactose-Broth.
2. From the pre-enrichment inoculate an appropriate amount into TBG-Broth and incubate for 18-24 h at 35-37 °C.
3. Streak onto appropriate Salmonella media.
4. Brown cultures to be examined further.

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

Quality control

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