



Reference : 02-041

Scharlau Microbiology - Technical data sheet

Product :  
BRILLIANT GREEN BILE 2% BROTH

**Also known as**

BGBLB; BLBVB;

**Specification**

Liquid medium used for the detection of coliforms in water, as recommended by APHA and ISO standards.

**Formula \* in g/L**

Bile ..... 20.000  
Lactose ..... 10.000  
Peptone ..... 10.000  
Brilliant green ..... 0.013

Final pH 7.2 ±0.2 at 25 °C

\* Adjusted and /or supplemented as required to meet performance criteria

**Directions**

Dissolve 40 g of powder in 1 L of distilled water and bring to the boil. Distribute into containers containing Durham tubes and sterilize in the autoclave at 115°C for 15 minutes.

**Description**

Brilliant Green Bile 2% Broth has been widely used as a medium for the assay of presumptive coliforms in food, milk and water, using the Most Probable Number Technique. This broth offers some advantages over other similar broths as its balanced composition of Bile and Brilliant Green effectively suppresses the growth of Gram positive bacteria.

It is recommended by the APHA for colimetry of water, milk and food. British and Australian methodology use the broth as an intermediate stage between presumptive and confirmative colimetry (30°C ±1,0). Other authors suggest it as an optimal base for the Eijkman testing of gas production at 44°C±1, for the identification of *E. coli*.

This medium can be used as presumptive broth for *E. coli* (by fluorescent reaction) if prior to sterilization MUG (4-Methylumbelliferyl-β-D- Glucuronide) (Art. No. 06-102LYO1) is added.

**Quality control**

**Incubation temperature:** 30 °C ± 1.0

**Incubation time:** 24-48 h ± 2

**Inoculum:** ≤100 CFU min. 50 CFU (productivity)/ 10<sup>4</sup> -10<sup>6</sup> CFU (selectivity), according to ISO 11133:2014/Amd 1:2018 & Adm 2:2020

**Microorganism**

*Salmonella typhimurium* ATCC® 14028  
*Escherichia coli* ATCC® 8739  
*Escherichia coli* ATCC® 25922  
*Citrobacter freundii* ATCC® 43864  
*Enterococcus faecalis* ATCC® 29212

**Growth**

Good to very good  
Good to very good  
Good to very good  
Good to very good  
Partial inhibition

**Remarks**

Gas (-). Durham tube  
Gas (+). Durham tube  
Gas (+). Durham tube  
Gas (+). Durham tube  
Selectivity



Left: Uninoculate tube (Control)  
Center: *Salmonella typhimurium* ATCC 14028  
Rigth: *Escherichia coli* ATCC 25922



" Detail"



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### References

- APHA (1971) Standard Methods for the Examination of Water and Wastewater. 13th ed. Washington.
- DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods. 4rd ed. APHA. Washington.
- FDA (Food and Drug Administrations) (1998) Bacteriological Analytical Manual. 8th ed. Rev. A. AOAC Intl. Gaithersburg, MD. USA.
- ISO 4831 Standard (2006) Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration of coliforms - MPN Technique.
- ISO 9308-1 Standard (1990) Water quality. Detection and enumeration of coliforms, thermotolerant coliforms and E.coli. MPN Method.
- ISO 11133:2014/ Adm 1:2018/ Adm 2:2020/ Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- PASCUAL ANDERSON, M<sup>ª</sup>R<sup>ª</sup> (1992) Microbiología Alimentaria. Díaz de Santos. S.A. Madrid.

### Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).