

BRILLIANT GREEN BILE BROTH

PRODUCT:

Tube Media:

Brilliant Green Bile Broth with Durham Tube, item no. T6255

PURPOSE:

Brilliant Green Bile Broth With Durham Tube is used for the detection of coliform organisms in foods, dairy products, water, wastewater, and other material of sanitary importance.

PRINCIPLE:

Brilliant Green Bile Broth was formulated by the Association of Official Analytical Chemistry and the American Public Health Association.^{1,2,3,5} The medium is a peptone base, containing 2% bile to inhibit gram-positive flora, and brilliant green dye to inhibit selected gram-negative bacilli. Coliforms are resistant to these ingredients and will replicate in the medium and ferment lactose, usually producing gas. Gas production is detectable in the Durham tube.

FORMULA:

Approximate, per liter deionized filtered water.

Bile	20.0 g
Lactose	10.0
Pancreatic Digest of Gelatin	10.0
Brilliant Green	13.3 mg
Final pH 7.2 ± 0.2 at 35°C	

PRECAUTIONS:*

For in vitro diagnostic use. Observe approved biohazard precautions.

Storage: Upon receipt store at 2-30°C away from direct light. Media should not be used if there are signs of contamination, deterioration (evaporation or discoloration), or if the expiration date has passed.

Limitations: This medium is for the presumptive identification for coliform bacteria only.

Prior to inoculation, the tube should be inverted to release trapped bubbles in the Durham tube; failure to do so could result in a false-positive interpretation.

An inoculated broth that develops turbidity is not indicative of a positive test for the presence of coliforms; turbidity must be accompanied by gas production in order for the test to be called positive.

PROCEDURE:*

Specimen Collection: Specimens should be submitted to the laboratory in a sterile container with a tightly fitting lid. Samples should be processed as soon as possible after arrival in the laboratory. Consult appropriate references for more detailed information.^{1,2,3,4}

Method of Use: Prior to inoculation, the medium should be brought to room temperature. Procedures for the use of Brilliant Green Bile Broth may be found in APHA publications, *Standard Methods for the Examination of Water and Wastewater*,³ *Standard Methods for the Examination of Dairy Products*,² and *Public Health Service Drinking Water Standards*.⁴

Interpretation:

Positive: Gas production within 48 hours is considered a positive result for the presence of coliform bacteria. Gas appears as bubbles within the Durham tube.

Negative: No gas production within the Durham tube in 48 hours is considered a negative test for coliforms.

Materials Required but Not Provided: Standard microbiological supplies and equipment such as loops, needles, incubators, and incinerators are not provided.

QUALITY CONTROL:***Microorganisms Used (ATCC #):**

Escherichia coli (25922)

Pseudomonas aeruginosa (27853)

Expected Results:

(+)

(-)

Key: See "Interpretation"

User Quality Control:* Check for signs of contamination and deterioration.

BIBLIOGRAPHY:

1. *Compendium of Methods for the Microbiological Examination of Food*, 2nd ed., American Public Health Association, Washington, D. C., 1984.
2. *Standard Methods for the Examination of Dairy Products*, 15th ed., American Public Health Association, Washington, D. C., 1978.
3. *Standard Methods for the Examination of Water and Wastewater*, 15th ed., American Public Health Association, Washington, D. C., 1980.
4. "Public Health Service Drinking Water Standards," Publication #956, U. S. Government Printing Office, Washington, D. C., 1962.
5. Williams, ed., *Official Methods of Analysis of the Association of Official Analytical Chemists*, 14th ed., AOAC, Arlington, Va, 1984.

*For more detailed information, consult appropriate references and/or details in the preface of the PML Technical Manual.

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