

## Product Information

### 16025 Brilliant Green Bile Lactose Broth (Brilliant Green Bile 2% Broth, BRILA-Broth)

For the selective enrichment and enumeration by titer determination or MPN method of *E. coli* and other fecal coliform from water, milk, food and other material.

#### Composition:

Ingredients	Grams/Litre
Peptone	10.0
Lactose	10.0
Ox-bile dried	20.0
Brilliant green	0.0133
Final pH 7.2 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

#### Directions :

Dissolve 40 g in 1 litre distilled water. Distribute to convenient flasks or give 10 ml into each test-tubes containing inverted Durham tubes. Sterilize by autoclaving at 121°C for 15 minutes.

An alternative procedure is to heat the dissolved broth at 100°C for 30 minutes, a recommended procedure when preparing double-strength broth.

Gas production from lactose fermentation is indicated by using inverted Durham tubes. Inoculate less than 1ml to one tubes and incubate 44°C for about 48 hours. In case of gas formation the Durham tubes rise.

#### Principle and Interpretation:

Brilliant Green Bile Lactose Broth is formulated for presumptive identification and confirmation of coliform bacteria.

Ox-bile and Brilliant green inhibit the growth of gram-positive bacteria including lactose fermenting Clostridia.

Production of gas from lactose fermentation is detected by incorporating inverted Durham's tube, indicates a positive evidence of faecal coliforms. Other non-faecal coliform bacterial also grow in this medium but mostly do not produce any gas. Brilliant Green Bile Lactose Broth is used for the confirmation of presumptive positive tubes showing gas production in Lactose Broth (Cat. No. 70142) or Lauryl sulfate Broth (Cat. No. 17349) in examination of water samples. Grampositive sporeformers may produce gas if the bile or Brilliant green inhibition is weakened by food material.

The addition of 4-methylumbelliferyl- b -D-glucuronide (MUG) like in the BRILA MUG Broth (Cat. No. 16016) will enhance the detection of *Escherichia coli*.

Cultural characteristics after 18-48 hours at 35-37°C.

Organisms (ATCC)	Growth	Gas
<i>Escherichia coli</i> (25922)	+++	+
<i>Enterobacter aerogenes</i> (13048)	+++	+
<i>Enterococcus faecalis</i> (19433)	-/+	-
<i>Staphylococcus aureus</i> (25923)	-	-
<i>Bacillus cereus</i> (10876)	-	-

References:

1. G. Szita, G. Biro, Acta Vet. Hung. 34, 145 (1986)
2. American Public Health Association, American Water Works Association and Water Pollution Control Federation: Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> ed. Washington (1992)
3. DIN Deutsches Institut für Normung e.V., Mikrobiologische Milchuntersuchung, Bestimmung der coliformen Keime. Referenzverfahren, DIN 10172.
4. Internationaler Milchwirtschaftsverband, Zählung coliformer Bakterien in Milch und Milchprodukten, Internationaler Standard FIL-IDF, 73 (1985).
5. International Organization for Standardization, Meat and meat products - Detection and enumeration of presumptive coliform bacteria and presumptive Escherichia coli, Reference method, International Standard ISOIDIS 3811 (1979)
6. A. E. Greenberg, R. R. Trussell and L. S. Clesceri (Eds.), Standard Methods for the Examination of Water and Wastewater, 16<sup>th</sup> ed., A.P.H.A., Washington D.C. (1985)
7. M. Speck (Ed.), 1985, Compendium of Methods for the Microbiological Examination of Foods, 2<sup>nd</sup> ed., A.P.H.A., Washington D.C.
8. Richardson G. (Ed.), 1985, Standard Methods for the Examination of Dairy Products, 15<sup>th</sup> ed, A.P.H.A., Washington, D.C.
9. McCrady and Langerin, 1932, J. Dairy Science, 15, 321.
10. McCrady, 1937, Am. J. Publ. Health, 27, 1243
11. International Organization for Standardization (ISO), Draft ISO/DIS 4831 (1991)
12. R.M. Baird, J.E.L. Corry and G.D.W. Curtis Editors, "Pharmacopoeia of Culture media for Food Microbiology" Internat. J. Food Microbiol., 5, 206 (1987)
13. H.G. Durham, H.W. Schoenlein, Stain Techn., 1, 129 (1926)
14. E.F.W. Mackenzie, E. Windle Taylor, W.E. Gilbert, J. Gen. Microbiol., 2, 197 (1948)
15. L.G. Lightbody, Aust. J. Dairy Techn., 18, 202 (1963)

**Precautions and Disclaimer**

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.