



Bromocresol Purple Broth with Lactose

M1265

Intended Use:

Recommended for identification of *Escherichia coli* and coliform bacteria from water samples.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
HM extract #	3.000
Sodium chloride	5.000
Lactose	10.000
Bromo cresol purple	0.020
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Meat extract

Directions

Suspend 28.02 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes containing inverted Durhams tubes. Sterilize by autoclaving at Δ 115°C for 20 minutes.

Δ Corresponds to 10 lbs pressure.

Principle And Interpretation

The coliform group of bacteria is the principal indicator of suitability of water for domestic, industrial or other uses. The coliform group density has been established as a criterion of the degree of pollution and thus of sanitary quality. Faecal Streptococci and Enterococci are also indicators of faecal pollution (1). Where it is claimed that drinking water has been processed for safety, the finding of such organism demonstrates a failure of the process. It is a valuable bacterial indicator for determining the extent of faecal contamination of recreational surface waters or drinking water (2).

Bromo Cresol Purple Broth with Lactose is used for the identification of *Escherichia coli* and coliforms from water. It is used for enrichment and determining the titre of coliforms in the bacteriological analysis of drinking water (3, 4).

The medium contains peptone and HM extract, which supplies the essential nutrients for *E. coli* and other coliforms. Sodium chloride maintains the osmotic equilibrium of the medium. Lactose upon fermentation by coliforms produce acid and is indicated by the pH indicator bromo cresol purple. It turns yellow at acidic pH.

Type of specimen

Water samples

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Purple coloured clear solution without any precipitate

Reaction

Reaction of 2.8% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18- 24 hours .

Organism	Inoculum(CFU)	Growth	Acid	Gas
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
<i>Enterococcus faecalis</i> ATCC 29212	50-100	fair-good	variable reaction	negative reaction
<i>Klebsiella pneumoniae</i> ATCC 13883	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
<i>Salmonella</i> Typhimurium ATCC 14028	50-100	good-luxuriant	negative reaction, no colour change	negative reaction

Reference

1. Eaton A. D., Clesceri L. S. and Greenberg A. E., (Eds), 1998, Standard Methods for the Examination of Water and Waste water, 20th Ed, APHA, Washington, D.C.
2. Corry J. E. L., Curtis G. D. W., and Baird R. M., Culture Media for Food Microbiology, Vol. 34, Progress in Industrial Microbiology, 1995, Elsevier, Amsterdam
3. Deutsche Einheitsverfahren zur Wasser- Abwasser- und Schalmuntersuchung. VCH Verlagsgesellschaft, D-6940, Weinheim.
4. Verordnung über Trinkwasser und über Wasser für Lebensmittelbetriebe vom 12. Dezember, 1990, Bundesgesetzbl., Teil I;2613-2629.1990.

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