Bromo Cresol Purple Broth w/Dextrose

M1463

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
Dextrose (Glucose)	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 Durham's tubes.Sterilize by autoclaving at Δ115°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 fecal contamination of recreational surface waters or drinking water (2).
Bromocresol Purple Broth with Dextrose 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. Dextrose 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

Specimen Collection and Handling:

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(1) After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

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
Alcaligenes faecalis ATCC 8750	50-100	fair-good	negative reaction,no colour change	negative reaction
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
Klebsiella aerogenes ATCC 13048	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
Klebsiella pneumoniae ATCC 13883	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
Salmonella Typhimurium ATCC 14028	50-100	good-luxuriant	positive reaction, yellow colour	positive 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 Schalmmuntersuchung. 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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