



Technical Data

Bromo Cresol Purple Broth Base (Yeast Fermentation Broth Base) M676

Intended Use:

Recommended for studying fermentation of carbohydrates by pure cultures.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
Sodium chloride	5.000
HM peptone B #	3.000
Bromo cresol purple	0.040
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Suspend 18.04 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 15 lbs pressure (121°C) for 10 minutes. Cool and aseptically add sterile desired carbohydrate to a final concentration of 0.5 - 1.0%.

Principle And Interpretation

Basal medium (without carbohydrates) are usually employed for studying the carbohydrate utilizing patterns of different organisms by the addition of the desired carbohydrate to the basal medium. Various indicator dyes are used in the basal medium to aid in the visualization of these carbohydrate-utilizing reactions. Bromo Cresol Purple Broth Base is one such basal medium, which employs bromocresol purple as the indicator dye. If the test organism ferments the added carbohydrate, the pH of the medium turns acidic due to the production of acids. The acidity thus produced causes the indicator BCP to change colour from purple to yellow. Air bubbles trapped in the inverted Durhams tubes indicate gas production. Bromo Cresol Purple Broth Base is recommended by APHA (4) for studying fermentation of carbohydrates by pure cultures (1). Bromo Cresol Purple Broth Base consists of a peptone medium supplemented with yeast extract to supply B complex vitamins necessary to support growth. Specific carbohydrates are added to the basal medium in a concentration of 0.5-1%. The pattern of fermentation of a battery of carbohydrates is characteristic of a given species or group of species and may be used for their classification or identification.

Type of specimen

Isolated Microorganism

Specimen Collection and Handling

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. Well isolated colonies must be used.

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 1.8% w/v aqueous solution at 25°C pH : 7.0±0.2

Cultural response

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

Organism	Inoculum (CFU)	Growth	Acid production (with added dextose)	Gas production (with added dextose)
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant	positive reaction, yellow colour	positive reaction
<i>Klebsiella pneumoniae</i> ATCC 13883 (00097*)	50-100	luxuriant	positive reaction, yellow colour	positive reaction
# <i>Klebsiella aerogenes</i> ATCC 13048 (00175*)	50-100	luxuriant	positive reaction, yellow colour	positive reaction
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	positive reaction, yellow colour	positive reaction
<i>Shigella flexneri</i> ATCC 12022 (00126*)	50-100	luxuriant	positive reaction, yellow colour	negative reaction

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. Atlas R. M., 2004, Handbook of Microbiological Media, 3rd Ed, CRC Press.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

Revision : 02/2020

Disclaimer :

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