



## Bromo Cresol Purple Broth Base

M676

Bromo Cresol Purple Broth is recommended for studying fermentation of carbohydrate by pure cultures.

### Composition\*\*

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Sodium chloride	5.000
Beef extract	3.000
Bromo cresol purple	0.040
Final pH ( at 25°C)	7.0±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 18.04 grams in 1000 ml 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 (1) for studying fermentation of carbohydrates by pure cultures (2).

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.

### 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.

#### Cultural Response

Organism	Inoculum (CFU)	Growth	Acid production (with added dextose)	Gas production (with added dextose)
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#### Cultural Response

<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	positive reaction, yellow colour	positive reaction
<i>Klebsiella pneumoniae</i> ATCC13883	50-100	luxuriant	positive reaction, yellow colour	positive reaction
<i>Enterobacter aerogenes</i> ATCC 13048	50-100	luxuriant	positive reaction, yellow colour	positive reaction
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	luxuriant	positive reaction, yellow colour	positive reaction
<i>Shigella flexneri</i> ATCC 12022	50-100	luxuriant	positive reaction, yellow colour	negative reaction

## Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

## Reference

- Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods For the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
- Atlas R. M., 2004, Handbook of Microbiological Media, 3rd Ed, CRC Press.

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