

Technical Information

Bromo Cresol Purple Broth Base

Product Code: DM 1676

Application: 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

Principle & Interpretation

Basal medium (without carbohydrates) are usually used for studying the carbohydrate utilizing behavior of different organisms by the addition of the desired carbohydrate to the basal medium. Various indicator dyes are used in the basal medium which helps in the visualization of these carbohydrate-utilizing reactions. Bromo Cresol Purple Broth Base is one such basal medium, in which bromocresol purple is used as indicator dye. If the test organism ferments the added carbohydrate, the pH of the medium turns acidic due to the production of acids and 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 behavior 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 different carbohydrates is characteristic of a given species or group of species and may be used for their classification or identification.

Methodology

Suspend 18.04 grams of powder media in 1000 ml distilled water. Shake well & 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%.

Quality Control

Physical 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

pH range:

6.8-7.2

Cultural Response/Characteristics

DM 1676: 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	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

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

- 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.

Disclaimer :

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