Bromo Cresol Purple 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 (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.

Type of specimen

Isolated Microorganism from food samples

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (1,7,8).
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 :

0- Vdkk hrnk`sdc bnknmhdr l trs ad trdc-

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the dwohqx odqhnc 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 25ºC 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 addded dextose)	Gas production (with addded dextose)
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	positive reaction,yellow colour	positive reaction
Klebsiella pneumoniae ATCC13883	50-100	luxuriant	positive reaction, yellow colour	positive reaction
Enterobacter aerogenes ATCC 13048	50-100	luxuriant	positive reaction,yellow colour	positive reaction
Salmonella Typhimurium *ATCC 14028*	50-100	luxuriant	positive reaction, yellow colour	positive reaction
Shigella flexneri ATCC 12022	50-100	luxuriant	positive reaction, yellow colour	negative reaction

Reference

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

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