Technical Information

MacConkey Broth Purple (Double Strength) w/ BCP

Product Code: DM 1796

Application: - MacConkey Agar w/ Bromo Thymol Blue is recommended for detection of lactose fermenting enteric bacteria.

Composition**

Ingredients	Gms / Litre
Peptic digest of anima	40.000
Lactose	20.000
Bile salts	10.000
Sodium chloride	10.000
Bromo cresol purple	0.020
Final pH (25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

MacConkey Broth Purple (Double Strength) w/ BCP is a modification of MacConkey Medium [(1)]. Childs and Allen [(2)] demonstrated the inhibitory effect of neutral red and therefore substituted it by the less inhibitory bromocresol purple dye. BCP is more sensitive in recording pH variation in the medium.

Peptic digest of animal tissue provides essential growth nutrients. Lactose is the fermentable carbohydrate. Sodium taurocholate inhibits growth of gram-positive organisms. Sodium chloride maintains the osmotic balance of the medium. Bromocresol purple is the pH indicator in the medium which turns yellow under acidic condition. Lactose fermentation turn the medium yellow due to the acid production. The colour change of the dye is observed when the pH of the medium falls below 6.8. Lactose non-fermenting organisms like Salmonella and Shigella do not change the appearance of the medium.

Liquid specimens are directly inoculated while solids have to be homogenized in appropriate diluents such as physiological saline, phosphate buffers, etc. The inoculation must be effected at 10% v/v in Durhams tubes. If the inoculum is greater than 1 ml, it is necessary to use the medium at double strength, inoculating equal volumes of specimen and medium.

Methodology

Suspend 80.02 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium and distribute into test tubes with inverted Durham tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance
Light yellow to beige homogeneous free flowing powder

Colour and Clarity of prepared medium
Purple clear solution without any precipitate or scum

Reaction
Reactionof 8.0% w/v aqueous solution at 25°C.pH:-7.4±0.2

pH range 7.20-7.60

Cultural Response/ characteristices
DM 1796: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Acid	Gas
Enterobacter aerogenes ATCC 13048	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
Escherichia coli ATCC 25922	50-100	good-luxuriant	positive reaction, yellow colour	positive reaction
Salmonella Choleraesuis ATCC 12011	50-100	fair to good	negative reaction, no colour change	negative reaction
Salmonella Typhimurium ATCC 14028	50-100	fair to good	negative reaction, no colour change	negative reaction
Staphylococcus aureus ATCC 25923	>=10^3	inhibited		

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^{o} in sealable plastic bags for 2-5 days.

Further Reading

1. MacConkey A. T., 1900, The Lancet, ii: 20.
2. Childs E. and Allen, 1953, J. Hyg: Camb. 51:468-477

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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