



## MacConkey Broth Purple w/ BCP

M083I

### Intended Use:

Recommended for presumptive identification of coliforms from water. The composition and performance criteria of this medium are as per the specifications laid down in ISO 9308-2:2012 & ISO 4832:2006.

### Composition\*\*

Ingredients	Gms / Litre
Peptone	20.000
Lactose	10.000
Bile salts	5.000
Sodium chloride	5.000
Bromocresol purple	0.010
Final pH ( at 25°C)	7.4±0.2

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

### Directions

Suspend 40.01 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense into test tubes with inverted Durham tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool the tubes to 45-50°C before inoculation.

### Principle And Interpretation

MacConkey Broth Purple 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. MacConkey Broth Purple w/ BCP is recommended by ISO committee (3) with the inclusion of bile salts, as a presumptive test medium for identification of coliforms from water and other materials of sanitary importance.

Peptone provides essential growth nutrients. Lactose is the fermentable carbohydrate. Bile salts or sodium taurocholate inhibits 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 fermenting organisms turn the medium yellow due to the acidity produced on lactose fermentation. 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 alter 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. 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.

### Type of specimen

Water samples

### Specimen Collection and Handling

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(3) 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. Liquid specimens are directly inoculated while solids have to be homogenized in appropriate diluents such as physiological saline, phosphate buffers, etc.
2. 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.



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