



## MacConkey Broth Purple

M083S

MacConkey Broth Purple is used for presumptive identification of coliforms from variety of specimens such as water, milk and food etc.

### Composition\*\*

Ingredients	Gms / Litre
Peptic digest of animal tissue	20.000
Lactose	10.000
Sodium taurocholate	5.000
Sodium chloride	5.000
Bromo cresol purple	0.020
Final pH ( at 25°C)	7.2±0.2

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

### Directions

Suspend 40.02 gm of medium in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool the tubes before inoculation.

### Principle And Interpretation

MacConkey Broth Purple is recommended for detection and estimation of coliforms in foodstuff (1) and for presumptive identification of coliforms from a variety of specimens such as water, milk and food. This medium is recommended for use in microbiological examination of foodstuff (2) and for direct inoculation of water samples for coliform counts. (3) This medium is also used for the Examination of Milk and Dairy Products (4) and pharmaceutical preparations (5). The selective action of this medium is attributed to Sodium taurocholate which are inhibitory to most species of gram-positive bacteria. Gram-negative bacteria usually grow well on the medium and are differentiated by their ability to ferment lactose. Lactose fermenting strains grow as yellow coloured. The yellow colour is due to production of acid from lactose. Lactose non-fermenting strains, such as *Shigella* and *Salmonella* are colourless and transparent and typically do not alter appearance of the medium.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Purple coloured clear solution in tubes

#### Reaction

Reaction of 4.0% w/v aqueous solution at 25°C. pH : 7.2±0.2

#### pH

7.00-7.40

#### Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

#### Cultural Response

Organism	Inoculum (CFU)	Growth	Acid	Gas
<i>Escherichia coli</i> ATCC 8739	50 -100	luxuriant	positive reaction, yellow colour	positive reaction
<i>Staphylococcus aureus</i> ATCC 6538	>=10 <sup>3</sup>	inhibited		
<i>Escherichia coli</i> ATCC 25922	50 -100	luxuriant	positive reaction, yellow colour	positive reaction

<i>Escherichia coli</i> NCTC 9002	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 Choleraesuis</i> ATCC 12011	50 -100	fair-good	negative reaction	negative reaction
<i>Staphylococcus aureus</i> ATCC 25923	$\geq 10^3$	inhibited		

### 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

1. Bureau of Indian Standards IS : 5401 - 1969.
2. Speck M. (Ed.), 1985, Compendium of Methods for the Microbiological Examination of Foods, 2nd ed., APHA, Washington, D.C.
3. Greenberg A. E., Clesceri L. S. and Eaton A. D., (Eds.), 1992, Standard Methods for the Examination of Water and Wastewater, 18th ed., APHA, Washington, D.C.
4. Marshall R. (Ed.), 1992, Standard Methods For the Examination of Dairy Products, 16th ed., APHA, Washington, D.C.
5. The United States Pharmacopoeia XXI and the National Formulary, 16th ed., 1985, United States Pharmacopoeial Convention, Inc., Washington, D.C.

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