TM 2229 - MacCONKEY BROTH MEDIUM 7.

INTENDED USE

For the selective identification of *E. coli* from pharmaceutical products in accordance with Indian Pharmacopoeia 2014.

PRODUCT SUMMARY AND EXPLANATION

MacConkey Broth is a modification of MacConkey Medium. Childs and Allen 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. Indian pharmacopoeia has recommended this medium for the presumptive identification of coliforms from water and other materials of sanitary importance. Transfer homogenate in Casein Soyabean Digest Broth containing 1 gm or 1 ml of the preparation to be examined to 100 ml MacConkey Broth Incubation is carried at 43°-45°C for 24-48 hours. For further isolation subculture on MacConkey Agar. Growth of red generally non-mucoid colonies, sometimes surrounded by a reddish precipitation zone, indicates pressure of coliforms.

COMPOSITION

Ingredients	Gms / Ltr
Gelatin Peptone	20.000
Lactose	10.000
Dehydrated ox-bile	5.000
Bromo cresol purple	0.010

PRINCIPLE

Gelatin peptone provides essential growth nutrients. Lactose is the fermentable carbohydrate. Dehydrated ox-bile inhibits gram-positive organisms. Bromo cresol purple is the pH indicator in the medium. Lactose fermenting organisms gives yellow colour to the medium due to drop in pH as a result of lactose fermentation. Lactose non-fermenting organisms like *Salmonella* and *Shigella* do not alter the appearance of the medium. Gas produced gets entrapped in inverted Durhams tube.

INSTRUCTION FOR USE

- Dissolve 35.01 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense Minto test tubes with inverted Durham tubes. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes or as per validated cycle
- Note: Directions specified are as per the concurrent edition of pharmacopoeia in force. Specified expiry period corresponds to this. User must ensure its compatibility with the latest edition.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Purple coloured clear to slightly opalescent solution in tubes.
pH (at 25°C) : 7.3±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

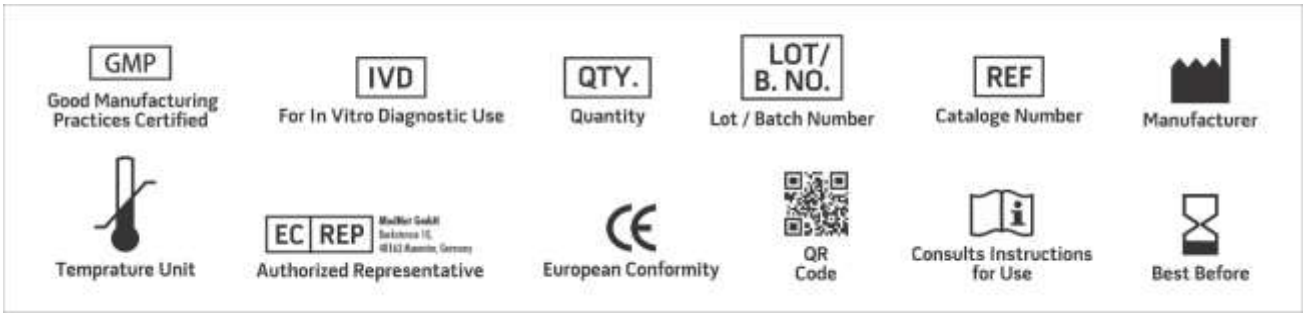
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid	Gas	Incubation Temperature	Incubation Period
Escherichia coli	8739	50-100	Luxuriant	Positive reaction, yellow colour	Positive reaction	42-44 °C	<=24 Hours
Staphylococcus aureus	6538	>=10^3	Inhibited	-	-	42-44 °C	>=48 Hours
Escherichia coli	25922	50-100	Luxuriant	Positive reaction, yellow colour	Positive reaction	30-35°C	18-24 Hours
Enterobacter aerogenes	13048	50-100	Luxuriant	Positive reaction, yellow colour	Positive reaction	30-35°C	18-24 Hours
Salmonella Choleraesuis	12011	50 -100	Fair-good	Negative reaction	Negative reaction	30-35°C	18-24 Hours
Staphylococcus aureus	25923	>=10^3	Inhibited	-	-	30-35°C	>=48 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. MacConkey A. T., 1900, The Lancet, ii: 20.
2. Childs E. and Allen, 1953, J. Hyg: Camb. 51:468-477.
3. Indian Pharmocoepoeia, 2014 Ministry of Health and Family Welfare, Govt. of India.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019