TM 1239 - MacCONKEY BROTH W/ NEUTRAL RED (DOUBLE STRENGTH) (IS : 5887 (Part I) 1976, reaffirmed 2005)

INTENDED USE

For primary isolation of coliforms from large samples like water.

PRODUCT SUMMARY AND EXPLANATION

MacConkey Broth (Double strength) is a differential medium used for detection and enumeration of coliforms from a variety of foodstuffs, water samples & clinical specimens. MacConkey Broth (Double strength) is also recommended for the primary isolation of coliforms from large samples such as water and wastewater. The medium differentiates the organisms on the basis of lactose fermentation which is indicated by a colour change. This medium is recommended by BIS committee under the specifications IS:5887(Part I and Part II) -1976.

COMPOSITION

Ingredients	Gms / Ltr
Peptic digest of animal tissue	40.000
Lactose	20.000
Sodium taurocholate	10.000
Sodium chloride	10.000
Neutral red	0.140

PRINCIPLE

The medium contains Peptic digest of animal tissue which provides the nitrogenous and other essential growth compounds. Sodium chloride maintains the osmotic balance of the cells. The selective action of these media is attributed to the presence of bile salts, which are inhibitory to most species of gram-positive bacteria. Gram-negative bacteria usually grow well on these media and are differentiated by their ability to ferment lactose. The colour change of the medium shown by lactose fermenters is due to production of acid from lactose and a subsequent colour change of the indicator dye when the pH of the media falls below 6.8. The medium turns pink in case of lactose fermenters and yellow in case of non- lactose fermenters, due to neutral red. Organism producing gas can be observed in preparation with Durham tubes.

INSTRUCTION FOR USE

- Dissolve 80.14 grams in 1000 ml distilled water.
- Gently heat to boiling with gentle swirling and dissolve the medium completely.
- Dispense into test tubes with inverted Durham's tube.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
- Cool the tubes before inoculation.

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	:	Cream to yellow, homogeneous free flowing powder
Appearance of Prepared medium- Basal medium	:	Red colored, clear solution
pH (at 25°C)	:	7.5± 0.2

INTERPRETATION

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

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid production	Gas production	Incubation Temperature	Incubation Period
Klebsiella aerogenes	13048	50-100	Luxuriant	Positive reaction	Positive reaction	35-37°C	18-24 hours
Escherichia coli	25922	50-100	Luxuriant	Positive reaction	Positive reaction	35-37°C	18-24 hours
Enterococcus faecalis	29212	50-100	None-Poor	Positive reaction	Negative reaction	35-37°C	18-24 hours
Proteus mirabilis	25933	50-100	Luxuriant	Negative reaction	Negative reaction	35-37°C	18-24 hours
Salmonella Choleraesuis	12011	50-100	Fair to Good	Negative reaction	Negative reaction	35-37°C	18-24 hours
Klebsiella pneumonie	13883	50-100	Luxuriant	Positive reaction	Positive reaction	35-37°C	18-24 hours
Staphylococcus aureus	25923	≥1000	Inhibited	-	-	35-37°C	18-24 hours

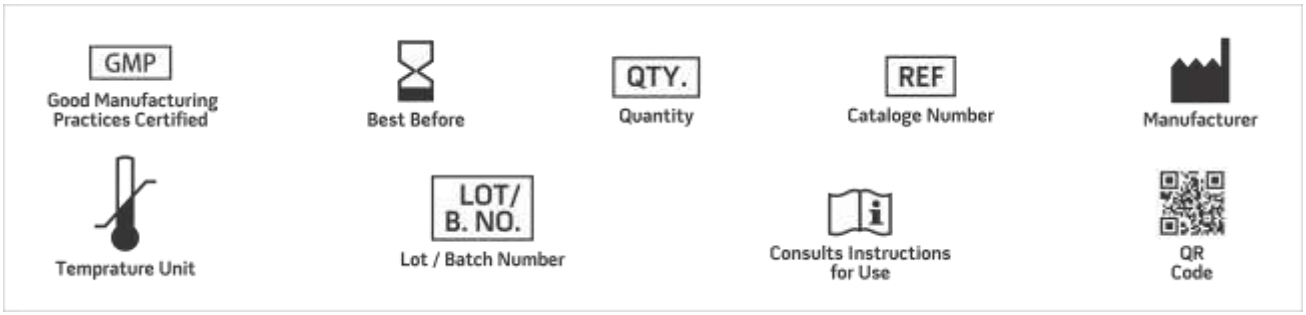
PACKAGING:
In 100 & 500 gm packaging size.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°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 powder if they show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

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

REFERENCES

1. Bureau of Indian Standards IS :5887 (Part II)- 1976, reaffirm 1986.
2. Marshall R. (Ed.), 1992, Standard Methods For the Examination of Dairy Products, 16th ed., APHA, Washington, D.C.
3. The United States Pharmacopoeia XXI and the National Formulary, 16th ed., 1985, United States Pharmacopeial Convention, Inc., Washington, D.C.



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

***For Lab Use Only**
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