MacConkey Agar BIS

Intended Use
MacConkey Agar is used for isolation, identification and enumeration of lactose fermenting and lactose nonfermenting enteric bacteria in compliance with BIS specification IS:5887 (Part I and Part II) -1976.

Summary
MacConkey Agar is recommended for isolation, identification and enumeration of *Staphylococcus aureus* and faecal Streptococci. MacConkey Agar is the earliest selective and differential medium for cultivation of enteric microorganisms from a variety of clinical specimens. Subsequently MacConkey Agar and Broth have been recommended for use in microbiological examination of foodstuffs and for direct plating/inoculation of water samples for coliform counts. These media are also accepted by the Standard Methods for the Examination of Milk and Dairy Products and pharmaceutical preparations.

Principle
Peptic digest of animal tissue provides nitrogenous and carbonaceous compounds long chain amino acids, vitamins and other essential growth nutrients. Original medium contains protein, bile salts, sodium chloride and two dyes. The selective action of this medium is attributed to bile salts, which is 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 red or pink and may be surrounded by a zone of acid precipitated bile. The red colour is due to production of acid from lactose, absorption of neutral red and a subsequent colour change of the dye when the pH of medium falls below 6.8. Lactose non-fermenting strains, such as *Shigella* and *Salmonella* are colourless and transparent and typically do not alter appearance of the medium.

Formula*
Ingredients	**g/L**
Peptic Digest of Animal Tissue	20.0
Lactose	10.0
Bile Salts	5.0
Sodium Chloride	5.0
Neutral Red	0.07
Agar	15.0
Final pH (at 25°C)	7.5 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Food and Dairy samples; Water samples.

Specimen Collection and Handling
Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 55.07 g of the powder in 1000 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle. AVOID OVERHEATING.
4. Cool to 45°C-50°C and pour into sterile petridishes.

Quality Control

Dehydrated Appearance: Light yellow to pinkish beige coloured, homogeneous, free flowing powder.
Prepared Appearance: Orange red coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation at 30°C-35°C for 18 - 24 hours.

Organism (ATCC)	Growth	Colour of Colony
Escherichia coli (25922)	Good	Pink with bile precipitate
Klebsiella aerogenes (13048)	Good	Pale pink
Enterococcus faecalis (29212)	Good	Pale pink
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (14028)	Good	Colourless
Proteus mirabilis (25933)	Good	Colourless
Staphylococcus aureus subsp. *aureus* (25923)	Inhibited	-

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

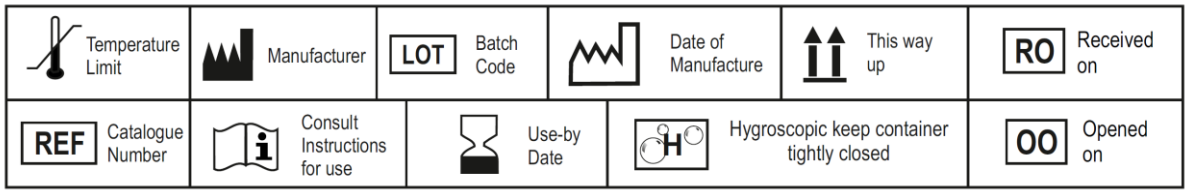
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Bureau of Indian Standards IS :5887 (Part II)- 1976, reaffirm 1986.
2. MacConkey, 1905, J. Hyg., 5:333.
3. MacConkey, 1900, The Lancet, ii:20
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201130150500	Dehydrated Culture Media	500 g



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Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.