MacConkey Agar without Crystal Violet and with 0.15% Bile Salts

Intended Use
MacConkey Agar is a differential medium recommended for selective isolation and differentiation of lactose fermenting and non-lactose fermenting enteric bacteria.

Summary
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. Original medium contains protein, bile salts, sodium chloride and two dyes. MacConkey Agar without Crystal Violet and with 0.15% Bile Salts is a modification of the original medium with the exception of crystal violet.

Principle
Peptone and proteose peptone serve as a source of carbon, nitrogen, long chain amino acids and other essential growth nutrients. 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 colonies. 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.

Formula*

Ingredients	**g/L**
Peptone	17.0
Proteose Peptone	3.0
Lactose	10.0
Bile Salts	1.5
Neutral Red	0.03
Sodium Chloride	5.0
Agar	15.0
Final pH (at 25°C)	7.1 ± 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
Clinical samples - Faeces; 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 51.53 g of the powder in 1000 mL purified / distilled water and mix thoroughly.
2. Boil with frequent agitation to dissolve the powder completely. AVOID OVERHEATING.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool to 45°C-50°C and pour into sterile petridishes.

Quality Control
Dehydrated Appearance: Light yellow to pinkish beige coloured, homogenous, free flowing powder.
Prepared Appearance: Red to orange red coloured, slightly opalescent gel forms in petridishes.

Cultural Response: Cultural characteristics observed after an incubation of 18-24 hours at 30°C-35°C.

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

Precautions / Limitations

1. Although this medium is selective for Gram-negative organisms, biochemical identification and serological testing using pure cultures is recommended for complete identification.
2. It is advised to incubate for recommended period and temperature to avoid misinterpretation of results.
3. It is advised to read the results immediately after incubation, as overgrowth of *Proteus* species may mask other colonies.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Warranty

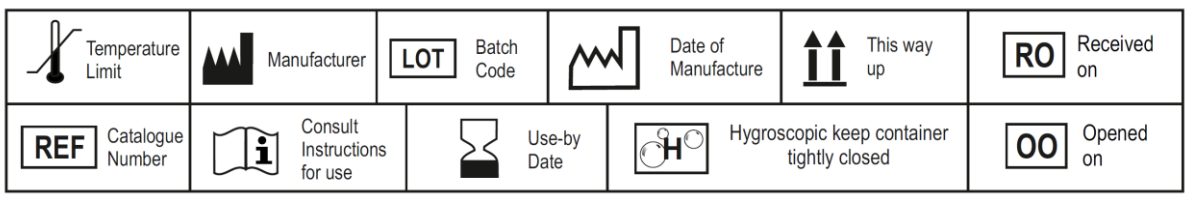
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. MacConkey, 1900, The Lancet, ii:20.
2. MacConkey, 1905, J. Hyg., 5:333.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201130160100	Dehydrated Culture Media	100 g
201130160500	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.