

## MacConkey Agar without Crystal Violet, NaCl and with 0.5% Sodium Taurocholate

### Intended Use

MacConkey Agar is used for the cultivation and differentiation of enteric bacteria and potentially pathogenic Gram-positive organisms while restricting swarming of *Proteus* species.

### 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 and pharmaceutical preparations.

### Principle

Original medium contains protein, bile salts, sodium chloride and two dyes. The selective action of this medium is attributed to bile salts, which are inhibitory to most species of Gram-positive bacteria. MacConkey Agar w/o CV, NaCl and w/ 0.5% Sodium taurocholate is a modification of the original formulation with the exclusion of crystal violet and inclusion of sodium taurocholate instead of bile salts. 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.

### Formula\*

Ingredients	g/L
Peptone	20.0
Lactose	10.0
Neutral Red	0.04
Sodium Taurocholate	5.0
Agar	20.0
Final pH (at 25°C)	7.4 ± 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 - Urine; Food and Dairy samples; Pharmaceutical 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 55.04 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Boil with frequent agitation to dissolve the powder completely. AVOID OVERHEATING.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

## 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 of 18-24 hours at 30°C-35°C.

Organism (ATCC)	Growth	Colour of Colony
<i>Escherichia coli</i> (25922)	Good	Pink
<i>Klebsiella aerogenes</i> (13048)	Good	Pink
<i>Acinetobacter baumannii</i> (19606)	Good	Pink
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> (14028)	Good	Colourless
<i>Proteus mirabilis</i> (25933)	Good	Colourless
<i>Enterococcus faecalis</i> (29212)	Good	Pale pink
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> (25923)	Good	Pale pink

## 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

The medium differentiates organisms on the basis of lactose fermentation. Further biochemical test must be carried out for confirmation.

## 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. Dwnes F. P. and Ito K. (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4<sup>th</sup> ed., APHA, Washington, D.C.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

## Product Presentation:

Cat No.	Product description	Pack Size
201130190100	Dehydrated Culture Media	100 g
201130190500	Dehydrated Culture Media	500 g
201130192500	Dehydrated Culture Media	2.5 k
203130770250	Bottle Media	6 x 250 mL
203130770100	Bottle Media	100 mL
205130910100	Ready Prepared Plate (90 mm)	100 Plates
205130910020	Ready Prepared Plate (90 mm)	20 Plates

## 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.

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