

Technical Data

MacConkey Agar (Without CV and with 0.15% Bile Salts, NaCl) 100 g / 500 g

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

Product Presentation:

| Cat No. | Product description | Pack Size |
|-------------|---|-----------|
| 11130110100 | MacConkey Agar (Without CV and with 0.15% Bile Salts, NaCl) | 100 Gram |
| 11130110500 | MacConkey Agar (Without CV and with 0.15% Bile Salts, NaCl) | 500 Gram |

Principle

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.

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 Grampositive 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.

Composition

Ingredients **Grams / Litre** 17.00 Peptone **Proteose Peptone** 03.00 Lactose 10.00 1.50 Bile Salts Sodium Chloride 05.00 0.030 **Neutral Red** 15.00 Agar

Final pH (at 25°C) 7.1±0.2

Type of specimen

Clinical samples - Faeces, Food and Dairy samples, Water samples.

FACTORY & OFFICE

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^{*}Formula adjusted, standardized to suit performance parameters



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Specimen Collection and Handling

Ensure that all samples are properly labeled. 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

- ✓ Suspend 51.53 g of powder in 1000 mL distilled water.
- ✓ Mix thoroughly.
- ✓ Boil to dissolve the medium completely. Avoid Overheating.
- ✓ Sterilize by autoclaving 121°C for 15 minutes or as per validated cycle.

Storage and Stability

- ✓ Store Dehydrated culture media in cool, dry place at 10°C-30°C away from direct light.
- ✓ Store 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.

Quality Control

Dehydrated Appearance: Light pink coloured homogeneous, free flowing powder **Prepared Appearance:** Orange Red coloured, slightly opalescent gel forms in petridishes.

Growth Promotion Test: The cultural characteristics observed after an incubation at 30°C-35°C for 18 to 48 hours.

Cultural Response:

| Organism | Type Culture | Growth | Colour of Colony | Incubation Temperature | Incubation Period |
|---|--------------|--------|--------------------------------|---------------------------|----------------------|
| Escherichia coli | ATCC 8739 | Good | Pink red with bile precipitate | 30°C -35°C | 18 Hours |
| Salmonella enterica subsp. enterica serovar Typhimurium | ATCC 14028 | Good | Colourless | 30°C -35°C | 18 Hours |

Inhibitory:

| Organism | Type Culture | Growth | Incubation Temperature | Incubation Period |
|-----------------------|--------------|-----------|---------------------------|----------------------|
| Staphylococcus aureus | ATCC 25923 | Inhibited | 30°C -35°C | 48 Hours |

Interpretation of Results

✓ Examination of plates for growth after completion of incubation period.

<u>Warranty</u>

✓ 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.

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Disposal

Disposal of infectious material and material that comes in to contact with clinical sample must be decontaminated and dispose of by autoclaving or incineration or established laboratory procedures.

User must be ensure safe disposal of used or unusable preparation of the products.

Reference

- 1. Murray P. R, Baron E, J., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
- 2. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C
- 3. Atlas, R. M. (2005). Handbook for media for environmental microbiology. CRC press.

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