



MacConkey Agar w/ 0.5% Bile Salts w/o Crystal Violet RDM-MCA-03

Principle

MacConkey agar is used for identification and enumeration of lactose fermenting and lactose non-fermenting enteric bacteria. It is recommended by BIS committee under the specifications IS:5887(Part I and Part II) -1976. The media is composed of peptone, lactose, bile salt, sodium chloride, neutral red, and agar. Peptone provides nitrogen and other nutrients necessary for the growth of microorganism. Lactose is a carbon source, plays an important role for selection of lactose fermenting microbes. Bile salt, inhibits growth of gram-positive except *Staphylococci* and *Enterococci*. Neutral red is pH indicator dye. Agar is solidifying agent. When lactose is fermented, acid is produced and results in bile salt precipitation. Since the lactose fermenting colonies of coliform bacteria are pink in color and may be surrounded by a zone of bile precipitation. While the bacteria that do not ferment lactose remain colorless. This medium is modified to permit the growth of *Staphylococcus* and *Enterococcus*. It lacks crystal violet which inhibits the growth of gram-positive bacteria. The *Staphylococci* produce pale pink to red colonies and *Enterococci* produce compact, shiny red colonies.

Use: Recommended for isolating and differentiating enteric microorganisms and permit the growth of *Staphylococci* and *Enterococci*. It is also used for identification and enumeration of lactose fermenting and lactose non-fermenting enteric bacteria. It is recommended by BIS committee under the specifications IS:5887(Part I and Part II) -1976.

Contents*

Ingredients

| | Gram/Litre |
|-----------------|------------|
| Peptone | 20.000 |
| Lactose | 10.000 |
| Bile Salt | 5.000 |
| Sodium Chloride | 5.000 |
| Neutral Red | 0.050 |
| Agar | 12.000 |
| pH at 25°C | 7.4 ±0.2 |

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 52.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples. food, dairy and water samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.