

### AMCA001

### Mac Conkey Agar

A medium for isolation and differentiation of coliforms and enteric pathogens based on lactose fermentation in accordance with harmonized method of USP/EP/BP/JP/IP.

| Composition                  | Ingredients Gms / Litre |
|------------------------------|-------------------------|
| Pancreatic digest of gelatin | 17.000                  |
| Peptones (Meat and Casein)   | 3.000                   |
| Lactose Monohydrate          | 10.000                  |
| Sodium chloride              | 5.000                   |
| Bile salts                   | 1.500                   |
| Neutral red                  | 0.030                   |
| Crystal violet               | 0.001                   |
| Agar -Agar                   | 13.500                  |

#### Appearance:

Red with purplish tinge colour Sterile Mac Conkey Agar in 90 mm Petri Plates

#### pH (at 25°C):

6.90 to 7.30

#### Principle:

MacConkey Agar is used for detection and isolation of Gram-negative organisms from water, pharmaceutical and industrial sources. MacConkey Agar conforms to harmonized USP/EU/JP. Pancreatic digest of Gelatin is the nitrogen and vitamin sources in MacConkey Agar. Lactose Monohydrate is the fermentable carbohydrate with Neutral red serving as the pH indicator. Sodium chloride maintains the osmotic balance. Agar is the solidifying agent. Bile salts mixture and Crystal violet are the selective agents, inhibiting Gram-positive cocci and allowing Gram-negative organisms to grow. 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. Inoculate MacConkey Agar medium with a small number (not more than 100 cfu) of the appropriate microorganism and incubate at 35±2°C for 18-24 hours. The growth of colonies indicates the possible presence of *Escherichia coli* and it shows red colour colonies.

#### Quantity of Medium

30ml of medium in 90mm plates

#### Dose of Gamma irradiation

12to 17 KGy

#### Cultural Response

Cultural characteristics observed by using standard ATCC cultures after an incubation 24 hours at 30-35°C and recovery should be greater than 70%.

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#### **Sterility Test:**

Passes release criteria.

#### **Shelf Life and Storage Conditions:**

Use before expiry date on the label and store below 25°C.

#### **Reference Pharmacopoeia:**

USP/EP / BP / JP / IP

