

MacConkey Agar w/o Crystal Violet and w/o Sodium Chloride

Cat. 1098

Differential medium for the detection and isolation of Enterobacteria, and inhibition of Proteus swarming. Recommended for urine analysis

Practical information

Applications	Categories
Differentiation	Enterobacteria

Principles and uses

MacConkey Agar w/o Crystal Violet and w/o Sodium Chloride is a differential medium used for the detection and isolation of enteric microorganisms. The lack of Sodium chloride provides an electrolyte deficient medium preventing *Proteus* spp. from spreading (swarming), aiding the detection and isolation of enteric microorganisms. Also, as this medium does not contain Crystal violet, staphylococci, enterococci and Mycobacteria species are able to grow well.

Gelatin peptone and peptone mixture provide nitrogen, vitamins, minerals and amino acids essential for growth. Lactose is the fermentable carbohydrate providing carbon and energy. Bile salts are the selective agents and inhibit Gram-positive organisms. Neutral red is the pH indicator. When lactose is fermented, the pH of the medium decreases, changing the color of neutral red into pink. Bacteriological agar is the solidifying agent.

Formula in g/L

Bacteriological agar	12	Bile salts N° 3	5
Gelatin peptone	17	Lactose	10
Neutral red	0,075	Peptone mixture	3

Preparation

Suspend 47 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121 °C for 15 minutes. Cool to 45-50 °C, mix well and dispense into plates.

Instructions for use

Inoculate and incubate at 35±2 °C for 18-24 hours.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Beige-pink	Red	7,4 ± 0,2

Microbiological test

Incubation conditions: (35±2 °C / 18-24 h).

Microrganisms	Specification	Characteristic reaction
<i>Enterobacter aerogenes</i> ATCC 13048	Good growth	Pink colony
<i>Proteus vulgaris</i> ATCC 13315	Good growth	Inhibited swarming. Colorless colony
<i>Enterococcus faecalis</i> ATCC 19433	Good growth	Pink point colony
<i>Escherichia coli</i> ATCC 25922	Good growth	Colony red-pink
<i>Staphylococcus aureus</i> ATCC 25923	Good growth	Pale pink colony

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

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