



HiCombi™ Nutrient - MacConkey Agar Plate

HB001

Combination of Nutrient Agar + MacConkey Agar w/ 0.15% Bile Salts, CV and NaCl recommended for selective isolation and differentiation of coliform and other enteric pathogens.

Composition**

Ingredients	Gms / Litre
Nutrient Agar	-
Beef extract	1.500
Yeast Extract	1.500
Sodium Chloride	5.000
Agar	15.000
MacConkey Agar	-
Pancreatic digest of gelatin	17.000
Casein enzymic hydrolysate	1.500
Peptic digest of animal tissue	1.500
Lactose	10.000
Bile salts	1.500
Sodium chloride	5.000
Neutral Red	0.030
Crystal Violet	0.001
Agar	15.000

**Formula adjusted, standardized to suit performance parameters

Directions

Streak the test inoculum (50-100 CFU) aseptically on the plate.

Principle And Interpretation

Biplates has unique combination of two media.

Nutrient media are basic culture media used for maintaining microorganisms, cultivating fastidious organisms by enriching with serum or blood and are also used for purity checking prior to biochemical or serological testing. Peptic digest of animal tissue, beef extract and yeast extract provide the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients necessary for the growth of bacteria. Sodium chloride maintains the osmotic equilibrium of the medium. Where as MacConkey agar is a differential medium for the selection and recovery of the *Enterobacteriaceae* and related enteric gram-negative bacilli. This medium is prepared in accordance with USP and contains crystal violet, NaCl and bile salts. It is very selective and suppresses growth of a number of Gram-positive bacteria including *Staphylococci*. Incubate slides at 35-37°C for 18-24 hours to observe cultural characteristics. Coliforms and *Enterobacter* give pink to red colonies on this medium and *Escherichia coli* gives pink to red colonies with bile precipitate.

Quality Control

Appearance

Sterile Nutrient Agar and MacConkey Agar in 90 mm disposable biplates.

Colour

Light amber coloured medium of Nutrient Agar and Red coloured medium with purplish tinge of MacConkey Agar

Quantity of medium

10ml of each medium in biplate

pH of Nutrient Agar

7.20- 7.60

pH of MacConkey Agar

6.90- 7.30

Sterility test

Passes release criteria

Cultural Response

Cultural characteristics observed after incubation at 35-37°C for 18-48 hours.

Organism	Growth on MacConkey Agar	Colour of colony on MacConkey Agar	Growth on Nutrient Agar
Cultural response			
<i>Enterobacter aerogenes</i> ATCC 13048	Luxuriant	Pink-red	-
<i>Escherichia coli</i> ATCC 25922	Luxuriant	Pink-red w/ bile precipitate	Good-luxuriant
<i>Proteus vulgaris</i> ATCC 13315	Luxuriant	Colourless	-
<i>S. serotype paratyphi A</i> ATCC 9150	Luxuriant	Colourless	-
<i>S. serotype paratyphi B</i> ATCC 8759	Luxuriant	Colourless	-
<i>S. serotype typhi</i> ATCC 6539	Luxuriant	Colourless	Good-luxuriant
<i>Enterococcus faecalis</i> ATCC 29212	None-poor	Colourless-pink	-
<i>Shigella flexneri</i> ATCC 12022	Fair-good	Colourless	-
<i>Staphylococcus aureus</i> ATCC 25923	Inhibited	-	Good-luxuriant
<i>S. serotype enteritidis</i> ATCC 13076	Luxuriant	Colourless	-
<i>Pseudomonas aeruginosa</i> ATCC 27853	-	-	Good-luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	-	-	Good-luxuriant

Storage and Shelf Life

Store between 20-30°C. Use before expiry date on the label.

Reference

Refer Technical Data of M001 Nutrient agar medium & M081 MacConkey agar w/ 0.15% Bile Salts, CV and NaCl.

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