OXALIS Diagnostics Pvt. Ltd.

Technical Data

MacConkey Agar with CV, NaCl and 0.15% Bile Salt. 100 mL

Used for the detection of coliforms and other enteric pathogens.

Product Presentation:

Cat No.	Product description	Pack Size
24010010100	MacConkey Agar with CV, NaCl and 0.15% Bile Salt.	100 mL

Principle

MacConkey agars are slightly selective and differential plating media mainly used for the detection and isolation of Gram-negative organisms from clinical, dairy, food, water, pharmaceutical and industrial sources. It is also recommended for the selection and recovery of the *Enterobacteriaceae* and related enteric Gram-negative bacilli. USP recommends this medium for use in the performance of Microbial Limit Tests. The original medium contains protein, bile salts, sodium chloride and two dyes. The selective action of this medium is attributed to crystal violet and bile salts, which are inhibitory to most species of Gram-positive 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 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, transparent and typically do not alter appearance of the medium. Peptone, Proteose Peptone are sources of nitrogen, carbon, long chain amino acids and other nutrients. Lactose is a fermentable carbohydrate. Sodium chloride maintains the osmotic equilibrium. Bile salts and crystal violet are selective agents that inhibit growth of Gram-positive organisms. Neutral red is the pH indicator dye.

Composition

Ingredients	Grams / Litre
Peptone	17.00
Proteose Peptone	03.00
Lactose	10.00
Bile Salts	1.50
Sodium Chloride	05.00
Neutral Red	0.030
Crystal Violet	0.001
Agar	13.50

Final pH (at 25°C) 7.1±0.2

*Formula adjusted, standardized to suit performance parameters

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Directions

- ✓ Loosen the cap.
- ✓ Melt the medium completely in water bath at 100 °C.
- ✓ Do not remove the cap of bottle while melting.
- ✓ Cool to 45°C-50°C mix well and pour in to the petriplates.

Quality Control

Appearance: Orange Red coloured, slightly opalescent gel.

Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 30°C-35°C for 18 to 72 hours.

Cultural Response :

Organism	Type Culture	Growth	Colour of Colony	Incubation Temperature	Incubation Period
Escherichia coli	ATCC 25922	Good	Pink 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

Storage and Stability

- ✓ Store ready to use MacConkey Agar with CV, NaCl and 0.15% Bile Salts in a cool, dry place at 15°C-25°C away from direct light.
- ✓ Stability of the kit is as per expiry date mentioned on the label.

Remarks

- ✓ Do not use media bottles that exhibit any damage, cracks, microbial contamination, discoloration, drying or other sign of deterioration.
- ✓ Ensure that the temperature of water bath is at 100°C so that the medium melts completely. Cooler water baths give rise to lumpy, uneven medium.
- ✓ Before pouring into sterile petriplates, gently swirl the bottle to check whether the entire contents are properly mixed and melted.
- ✓ Good laboratory practices and hazard precautions must be observed at all times.
  After use media containers, prepared plates, sample, sample containers and other contaminated materials must be sterilized or incinerated before discarding.

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Warranty

- ✓ 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.

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 preperation 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

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