Technical Data Sheet

RTA.KK.266 Revision Date/Revision Number:-/0 Issue Date: 01.11.2014

MACCONKEY AGAR
(60 MM)

INTENDED USE:
A selective medium giving excellent differentiation between coliforms and non-lactose fermenters with inhibition of Gram-positive micrococci.

PRINCIPLE AND INTERPRETATION:
MacConkey agar is a selective and differential culture medium for bacteria designed to selectively isolate Gram-negative and enteric (normally found in the intestinal tract) bacilli and differentiate them based on lactose fermentation. The crystal violet and bile salts inhibit the growth of gram-positive organisms which allows for the selection and isolation of gram-negative bacteria. Enteric bacteria that have the ability to ferment lactose can be detected using the carbohydrate lactose, and the pH indicator neutral red.

COMPOSITION:

Ingredients	Gr/Liter
Peptone	20 gr
Lactose	10 gr
Bile salts No.3	1,5 gr
Sodium chloride	5 gr
Neutral red	0,03 gr
Crystal violet	0,001 gr
Agar	15 gr

***Formula adjusted, standardized to suit performance parameters

pH: 7,2 ± 0,2

PRECAUTIONS:
For professional use only. Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

TEST PROCEDURE:

Membrane Filter Method:
1. Shake the sample bottle vigorously at least 25 times to uniformly distribute the bacteria.
2. Aseptically filter a predetermined volume of the sample through a 47mm, 0.45 +/- 0.02um pore size membrane filter and rinse the sides of the funnel at least twice with 20 to 30ml of sterile buffered rinse water.
3. Use sterile forceps to aseptically remove the membrane filter from the filter base and roll it onto the surface of the agar, filtered side up, to avoid the formation of air bubbles between the membrane and agar surfaces. Reseat the membrane if bubbles occur.
4. Incubate inverted plates aerobically at 35 +/- 0,2ºC. for 24 hours and observe for typical colonies.

QUALITY CONTROL:

1.Sterility Control:
Incubation 72 hours at 20-25ºC and 48 hours at 30-35ºC: NO GROWTH

2.Phsical/Chemical Control
pH: 7,2 ± 0,2
Apperance: Reddish purple

3.Microbiological Control: Incubation at 37 ºC during 24 h.

Microorganism	Inoculum (CFU)	Results	
		Growth	Reaction
Escherichia coli ATCC 25922	10-100	Growth	Good growth; red colonies with bile precipitation
Shigella sonnei ATCC 25931	10-100	Growth	Good growth; straw coloured colonies
Enterococcus faecalis ATCC 29212	100-1000	Inhibited	Good growth; yellow colonies

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STORAGE CONDITIONS AND SHELF LIFE:
Store the prepared medium at 2 - 12°C. Use before expiry date on the label. Do not use beyond stated expiry date.

DISPOSAL:
Incubated prepared medium may contain active bacteria and micro-organisms. Do not open infected medium. Infected plate should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

PACKAGING:
Katalog Number: 02120
Packaging: Single wrap
Content: 10 plates/each package

REFERENCES:
1. American Public Health Association (1998) Standard Methods for the Examination of Water and Wastewater. 20th Edn. APHA Inc. Washington DC.
2. American Public Health Association (1976) Compendium of methods for the Microbiological Examination of Foods. APHA Inc. Washington DC.
3. American Public Health Association (1978) Standard Methods for the Examination of Dairy Products. 14th Edn. APHA Inc. Washington DC.
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5. Medrek T. F. and Barnes Ella M. (1962) J. Appl Bact. 25(2). 159-168.
6. Barnes Ella M. and Shrimpton D. H. (1957) J. Appl. Bact. 20(2). 273-285.
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8. Eddy B. P. (1960) J. Appl. Bact. 23(2). 216-249.
9. Anderson R. L., Graham D. R. and Dixon R. E. (1981) J. Clin. Microbiol. 14. 161-164.
10. Trepeta A. W. and Edburg S. C. (1984) J. Clin. Microbiol. 19. 172-174.
11. Maddocks J. L. and Greenan M. J. (1975) J. Clin. Pathol. 28. 686-687

STERILE A	Aseptic Sterile	Use by	Look at user manual
LOT	Batch Code	Temperature Limitation	Manufacturer
REF	Catalogue Number	Do not reuse	
CONTROL –	Negative Controls	Contains sufficient for <n> tests	
CONTROL +	Positive Controls		