DebenDiagnosticsLtd

# MACCONKEY AGAR w/o CRYSTAL VIOLET AND w/o SODIUM CHLORIDE

## CAT Nº: 21098

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

## FORMULA IN g/l

| | | | |
|---|---|---|---|
| Gelatin Peptone | 17.00 | Peptone Mixture | 3.00 |
| Lactose | 10.00 | Neutral Red | 0.075 |
| Bile Salts N ° 3 | 5.00 | Bacteriological Agar | 12.00 |

**Final pH 7.4 ± 0.2 at 25ºC**

## 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 121ºC for 15 minutes. Cool to 45-50ºC, mix well and dispense into plates. The prepared medium should be stored at 8-15ºC. The color is red.

The dehydrated medium should be homogeneous, free-flowing and beige-pink in color. If there are any physical changes, discard the medium.

## 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.

Inoculate and incubate at 35 ± 2ºC for 18 – 24 hours.

## MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 35 ± 2ºC and observed after 18 - 24 hours.

| Microorganisms | Growth | Colony Color |
|---|---|---|
| *Escherichia coli* ATCC 25922 | Good | Red-pink |
| *Enterobacter aerogenes* ATCC 13048 | Good | Pink |
| *Proteus vulgaris* ATCC 13315 | Good | Inhibited swarming. Colorless |
| *Staphylococcus aureus* ATCC 25923 | Good | Pale pink |
| *Enterococcus faecalis* ATCC 19433 | Good | Pink pinpoint |

## BIBLIOGRAPHY


MacConkey, A. 1905 Lactose-fermenting bacteria in feces J. Hyg 5:333-379

Murray, P.R., E.J. Baron, M.A. Pfaller, F,C, Tenover, and R.H. Yolken (eds) Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C.

Mazura-Reets, G.T. Neblett, and J.M. Galperin, 1979 MacConkey Agar: Co2 vs. ambient incubation. Abst. Ann. Mtg. American Society for Microbiology. C179.


## STORAGE

Once opened keep powdered medium closed to avoid hydration.