

## MACCONKEY AGAR w/o CRYSTAL VIOLET

For the growth of staphylococci and enterococci for the differentiation of enteric microorganisms in water, dairy products and feces samples

**CAT N°: 21037**

### FORMULA IN g/l

Gelatin Peptone	17.00	Peptone Mixture	3.00
Lactose	10.00	Neutral Red	0.03
Bile Salts N°3	5.00	Bacteriological Agar	12.00
Sodium Chloride	5.00		

**Final pH 7.4 ± 0.2 at 25°C**

### PREPARATION

Suspend 52 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. The medium should be stored at 8-15°C. The color is orange-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 is based on the MacConkey Bile Salt–Neutral Red Lactose Agar (Cat.21052) and is used for the investigation of enteric microorganisms, especially enterococci from water, feces and other materials.

MacConkey Agar w/o Crystal violet is less selective, lacking the inhibitory Crystal violet and thereby allowing the growth of *Staphylococcus* and *Enterococcus*. Staphylococci produce pale pink to red colonies and enterococci produce tiny red compact colonies on or beneath the surface of the medium.

Pancreatic digest of gelatin and Meat and Casein peptones provide nitrogen, vitamins, minerals and amino acids essential for growth. Lactose is the fermentable carbohydrate providing carbon and energy. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Bile salts are the selective agents and inhibit Gram positive organisms. Neutral red is the pH indicator and when lactose is fermented, the pH of the medium decreases, changing

the colour of neutral red into pink. Bacteriological agar is the solidifying agent.

MacConkey Agar w/o Crystal Violet is plated directly with the suspected sample. For suspected pathogens from faeces and other materials, also inoculate in other parallel selective media such as Desoxycholate Agar (Cat. 21020) or DCLS Agar (Cat. 21045).

Plates are inoculated and incubated at 35 ± 2°C and observed after 18 - 24 hours.

### CHARACTERISTICS OF THE COLONIES

ORGANISMS	COLONY CHARACTERISTIC
<i>Escherichia coli</i>	Red or Pink
<i>Enterobacter aerogenes</i>	Pink, Mucoid
Enterococci	Red, Small, Discrete
Staphylococci	Red to Pink
<i>Salmonella Shigella &amp; Pseudomonas</i>	Colourless, Lactose-negative

### MICROBIOLOGICAL TEST

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

Microorganisms	Growth	Colony Color
<i>Escherichia coli</i> ATCC 25922	Good	Red-pink
<i>Enterobacter aerogenes</i> ATCC 13048	Good	Pink
<i>Salmonella enteritidis</i> ATCC 13076	Good	Colourless
<i>Staphylococcus aureus</i> ATCC 25923	Good	Pink
<i>Staphylococcus aureus</i> ATCC 12228	Good	Pink

### BIBLIOGRAPHY

Gray, L.D. 1995. *Escherichia*, *Salmonella*, *Shigella* and *Yersinia*, p. 450-456. In P.R. Murray, E.J. Baron, M.A. Tenover, and F.C. Tenover, and R.H. Tenover (ed.), *Manual of clinical microbiology*, 6th ed. American Society for Microbiology, Washington, D.C.

Eaton, A.D., L.S. Clesceri, and A.E. Greenberg (ed.) 1995. *Standard methods for the examination of water and wastewater*, 19th ed. American Public Health Association, Washington, D.C.

### STORAGE

Once opened keep powdered medium closed to avoid hydration.

