

## 70144 Mac Conkey Bouillon

A presumptive medium for the detection or/and determination of the titer of the coliform group in water milk and other material acc. Mac Conkey.

### Composition:

Ingredients	Grams/Litre
Peptone	20.0
Lactose	10.0
Bile salts	5.0
Sodium chloride	5.0
Neutral red	0.075

Final pH 7.4 +/- 0.2 at 25°C

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

### Directions:

Add 40 g to 1 litre of distilled water. Mix well and distribute into containers fitted with Durham tubes. Sterilize by autoclaving at 121°C for 15 minutes.

Gas production from lactose fermentation is indicated by using inverted Durham tubes. Inoculate the tubes containing 10 ml of Mac Conkey Broth and the Durham tubes and incubate at 35°C for 24-48 hours. In case of gas formation the Durham tubes rise.

### Principle and Interpretation:

Peptone provides nitrogen, carbon compounds, vitamins and amino acids. Lactose is the fermentable sugar. Lactose-positive bacteria metabolize lactose with gas formation. Gas generation within 48 hour or less is a presumptive evidence of the presence of coliform bacteria. If acid and gas is produced, it can be *E.coli* or other coliforms. The acid production is detected by the indicator Neutral red, which turns red. Bile salts promote the growth of several species of intestinal bacteria and inhibit gram-positive bacteria.

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

Organisms (ATCC)	Growth	Color change to red (Acid)	Gas
<i>Escherichia coli</i> (25922)	+++	+	+
<i>Enterobacter aerogenes</i> (13048)	+++	+	+
<i>Enterobacter cloacae</i> (13047)	+++	+	+
<i>Klebsiella pneumonia</i> (13883)	+++	+	+
<i>Proteus mirabilis</i> (11060)	+++	-	-
<i>Salmonella choleraesuis</i> (12011)	+	-	-
<i>Staphylococcus aureus</i> (25923)	-	-	-



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## References:

1. A. MacConkey, J. Hyg. 8, 333 (1905)
2. Recommendations of the Public Health Laboratory Service Water Subcommittee, J. Hyg. Camb. 51, 268 (1953)
3. European Pharmacopeia II, Chapter VIII, 10
4. A. MacConkey, Bile salt media and their advantages in some bacteriological examinations, J. Hyg., 8; 322 (1908)
5. J. MacFaddin, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore (1985)
6. Deutsches Arzneibuch DAB 10
7. A. MacConkey, Bile salt broth, Thompson Yates Lab. Rep., VI/1, 151 (1901)

## Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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