

MacConkey Broth

For the detection of coliforms in water, milk and other materials of sanitary importance

Formula in grams per liter:

| | | | |
|---------------------------|-------|---------------------|-------|
| Gelatin Pancreatic Digest | 20,00 | Lactose Monohydrate | 10,00 |
| Dehydrated Oxbile | 5,00 | Bromcresol Purple | 0,01 |

Final pH: $7,3 \pm 0,2$ at 25 °C

Preparation:

Suspend 35 grams of medium in one liter of distilled water. Heat with frequent agitation until completely dissolved. To analyze 10 ml samples, prepare a double concentration medium. Dispense in test tubes with a gas collecting tube (Durham) 10 ml amount for samples of 1 ml or less. Sterilize in an autoclave at 121°C (15 lbs. of pressure) for 15 minutes.

Uses:

MacConkey broth is used for cultivating gram-negative, lactose, fermenting bacilli in water and foods, as a presumptive test medium for the presence of coliform organisms in water and other materials of sanitary importance. Formation of gas and acid confirm the presence of coliforms, as demonstrated by the change of medium color from purple to yellow.

Microbiological Tests:

| Microorganisms | Growth | Acid | Gas |
|--|--------------|------|-----|
| <i>Enterobacter aerogenes</i> ATCC 13048 | Satisfactory | + | + |
| <i>Escherichia coli</i> ATCC 25922 | Satisfactory | + | + |
| <i>Salmonella cholerasuis</i> ATCC 12011 | Acceptable | - | - |
| <i>Staphylococcus aureus</i> ATCC 25923 | Null | - | - |

