

PRODUCT INFORMATION

Product Type: Bottle product (100ml)

Cat No. BP337 - MACCONKEY BROTH (MCB)

Intended Use:

MacConkey Broth is used for cultivating gram-negative, lactose fermenting bacilli in water and foods as a presumptive test for coliforms.

Principles and uses:

MacConkey Broth is a modification of the original bile salt broth recommended by MacConkey¹ that contained 0.5% sodium taurocholate and litmus as an indicator. In later publications^{2,3} MacConkey suggested variations of this formulation using neutral red indicator instead of litmus. Childs and Allen⁴ demonstrated the inhibitory effect of neutral red and substituted the less inhibitory bromcresol purple. Oxgall in the medium replaces the original sodium taurocholate to inhibit growth of gram-positive organisms. Peptone provides amino acids and other growth factors. Lactose is a carbon energy source for gram-negative lactose fermenting bacilli. Oxgall inhibits the growth of gram-positive organisms. Bromcresol purple is the indicator.

Expected Results

Lactose-fermenting organisms grow very well in MacConkey Broth and produce acid, causing the medium to turn yellow.

References

1. MacConkey. 1901. Zentralbl. Bakteriolog. 29:740.
2. MacConkey. 1905. J. Hyg. 5:333.
3. MacConkey. 1908. J. Hyg. 8:322.
4. Childs and Allen. 1953. J. Hyg. Camb. 51:468

Composition:

Oxgall	5.0 g/L
Peptone	20.0 g/L
Lactose	10.0 g/L
Bromcresol Purple	0.01 g/L

Storage: 15-25°C

pH at RT: 7.1 - 7.5

Appearance: Purple, clear

Exp. Date: Printed on label and on the item.

Required materials not supplied: Laboratory equipment as required.

Warning and Precautions:

Warning and Precautions - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Bottles if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Bottles may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.

Waste Disposal

After interpretation all items should be destroyed by standard incineration methods.

Performance Testing Results:

GPT: inoculum 10-100 cfu

Inhibitory properties: inoculum 1000 cfu

TEST	ATCC	Incubation Temp. (°C)	Incubation Cond.	Reaction 1	
<i>Escherichia coli</i>	8739	42-44 °C	Aerobic, 24 hours	Growth	Yellow color
<i>Staphylococcus aureus</i>	6538	42-44 °C	Aerobic, 48 hours	Inhibited	