

## TMH 109 - MacCONKEY BROTH (as per USP/EP/JP/BP/IP)

### INTENDED USE

For detection and enumeration of coliform bacteria.

### PRODUCT SUMMARY AND EXPLANATION

MacConkey Broth is a modification of MacConkey Medium. Childs and Allen demonstrated the inhibitory effect of neutral red and therefore substituted it by the less inhibitory bromocresol purple dye. BCP is more sensitive in recording pH variation in the medium. This medium is prepared in accordance with the harmonized method of USP/EP/JP/BP/IP.

### COMPOSITION

Ingredients	Gms / Ltr
Pancreatic digest of Gelatin	20.000
Lactose monohydrate	10.000
Dehydrated Ox bile	5.000
Bromocresol purple	0.010

### PRINCIPLE

Pancreatic digest of gelatin provides necessary nitrogen source. Lactose is the carbohydrate for Gram-negative lactose-fermenting bacilli. Bromocresol purple is the pH indicator in the medium, which turns yellow under acidic condition. Lactose fermenting organisms turn the medium yellow due to the acidity produced on lactose fermentation. The colour change of the dye is observed when the pH of the medium falls below 6.8. Lactose non-fermenting organisms like *Salmonella* and *Shigella* do not alter the appearance of the medium. Dehydrated Ox bile inhibits the growth of Gram-positive organisms.

### INSTRUCTION FOR USE

- Dissolve 35.01 grams of the medium in 1000 ml distilled water.
- Gently heat to boiling with swirling to dissolve the medium completely.
- Dispense into test tubes containing Durham tubes.
- Sterilize by autoclaving at 15 psi (at 121°C) for 15 minutes.
- Cool to room temperature prior to inoculation.

### QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	:	Cream to yellow colour with green tinge, homogeneous free flowing powder
Appearance of Prepared medium	:	Purple colour, clear to slightly opalescent solution
pH (at 25°C)	:	7.3±0.2

### INTERPRETATION

Culture characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid/Gas production	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	+ve reaction Yellow color / +ve	30-35°C	≤24 Hours



<i>Escherichia coli</i>	8739	50-100	Luxuriant	+ve reaction Yellow color / +ve	42-44°C	<=24 Hours
# <i>Klebsiella aerogenes</i>	13048	50-100	Luxuriant	+ve / +ve	30-35°C	<=24 Hours
<i>Salmonella choleraesuis</i>	12011	50-100	Good	-ve / -ve	30-35°C	<=24 Hours
<i>Staphylococcus aureus</i>	25923	≥1000	Inhibited	-	30-35°C	>=48 Hours
<i>Staphylococcus aureus</i>	6538	≥1000	Inhibited	-	42-44°C	>=48 Hours

# Formerly known as *Enterobacter aerogenes*

## PACKAGING

In 100 & 500 gm packaging size.

## STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










**Product Deterioration:** Do not use, if powder show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

## DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

## REFERENCES

1. British Pharmacopoeia, 2016, The Stationery office British Pharmacopoeia.
2. Childs E. and Allen, 1953, J. Hyg: Camb. 51:468-477.
3. Japanese Pharmacopoeia, 2016.
4. MacConkey A. T., 1900, The Lancet, ii: 20.
5. The United States Pharmacopoeia, 2019, The United States Pharmacopoeial Convention. Rockville, MD.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For professional use only.**

**Revision: 10<sup>th</sup> July, 2020**