

TMKH 008 – MacCONKEY BROTH (USP/EP/JP/BP/IP)

INTENDED USE

For the selective enrichment of *Escherichia coli* in accordance with the harmonized method.

PRODUCT SUMMARY AND EXPLANATION

MacConkey Broth is a modification of the original bile salt broth recommended by MacConkey, which contained 0.5% sodium taurocholate and litmus as an indicator. MacConkey later suggested variations of this formulation using neutral red as an indicator instead of litmus. Consequently, Childs and Allen demonstrated the inhibitory effect of neutral red and further revised the formula to include the less inhibitory bromcresol purple. BCP is more sensitive in recording pH variation in the medium. Bile salts in the growth medium replaced the original sodium taurocholate. MacConkey Broth is recommended for presumptive identification of coliforms and is prepared in accordance with the harmonized method of USP/EP/BP/JP/IP. It is used as a presumptive test medium for coliforms in pharmaceutical products and other materials of sanitary importance.

COMPOSITION

Ingredients	Gms / Ltr		
Peptic digest of animal tissue	20.000		
Lactose	10.000		
Sodium taurocholate	5.000		
Sodium chloride	5.000		
Bromo cresol purple	0.010		

PRINCIPLE

Pancreatic digest of gelatin provides essential growth nutrients and serves as a rich nitrogen source. Sodium taurocholate inhibits gram positive organisms. Lactose is the fermentable carbohydrate. Bromo cresol purple is the pH indicator in the medium that turns yellow under acidic condition due to lactose fermentation.

INSTRUCTION FOR USE

Label the ready to use MacCONKEY BROTH (USP/EP/JP/BP/IP) bottle. Inoculate the sample and Incubate at specified temperature and time.

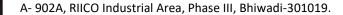
QUALITY CONTROL SPECIFICATIONS

Appearance of Prepared media	: Purple colour solution
Sterility test	: Passes the release criteria.
pH (at 25°C)	: 7.3±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	lnoculum (CFU/ml)	Growth	Incubation Temperature	Acid / Gas production	Incubation Period
Escherichia coli	25922	50 - 100	Luxuriant	30-35°C	+ve / +ve	18-24 Hours



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Escherichia coli	8739	50 - 100	Luxuriant	42-44°C	+ve / +ve	18-24 Hours
Enterobacter aerogenes	13048	50 – 100	Luxuriant	30-35°C	+ve / +ve	18-24 Hours
Salmonella choleraesuis	12011	50 - 100	Good	30-35°C	- ve / -ve	18-24 Hours
Staphylococcus aureus	25923	≥ 1000	Inhibited	30-35°C	-	18-24 Hours
Staphylococcus aureus	6538	≥ 1000	Inhibited	42-44°C	-	≥48 Hours

PACKAGING:

In pack size of 100 ml X 25, and 500 ml X 6 bottles.

STORAGE

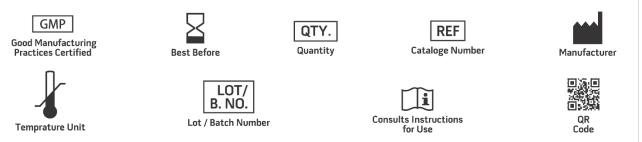
On receipt, store bottles in the dark at 10–25 °C. Avoid freezing and overheating. Do not open until ready to use. Minimize exposure to light. Bottled media stored as labeled until just prior to use may be inoculated up to the expiration date and incubated for the recommended incubation times. Allow the medium to warm to room temperature before inoculation

DISPOSAL

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

REFERENCES

- 1. MacConkey. 1901. Zentralbl. Bakteriol.; 29:740.
- 2. MacConkey, A.T. 1905. Lactose-fermenting bacteria in faeces. J. Hyg.; 5:333-379.
- 3. MacConkey. 1908. J. Hyg.; 8:322.
- 4. Childs, Eileen and Allen, L.A. 1953. Improved methods for determining the most probable number of *Bacterium coliand* of *Streptococcus faecalis*. *J. Hyg*.; 51:468-477.
- 5. The United States Pharmacopoeia, 2011, The United States Pharmacopeial Convention. Rockville, MD.
- 6. British Pharmacopoeia, 2011, The Stationery office British Pharmacopoeia
- 7. European Pharmacopoeia, 2011, European Dept. for the quality of Medicines. Japanese Pharmacopoeia, 2008.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices. *For Lab Use Only Revision: 09 Aug., 2023

A- 902A, RIICO Industrial Area, Phase III, Bhiwadi-301019.