

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 bromocresol 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 | Inoculum (CFU/ml) | Growth | Incubation Temperature | Acid / Gas production | Incubation Period |
|-------------------------|-------|-------------------|-----------|------------------------|-----------------------|-------------------|
| <i>Escherichia coli</i> | 25922 | 50 – 100 | Luxuriant | 30-35°C | +ve / +ve | 18-24 Hours |



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

| | | | | |
|--|---|---|--|---|
|  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 Lab Use Only**
Revision: 09 Aug., 2023