



MacConkey Broth Double Strength with BCP

RDM-MCB-04

Principle

MacConkey Broth is composed of peptone, lactose, Oxgall, and bromocresol purple. Peptone provide nitrogen and other nutrients necessary for the growth of microorganism. Lactose is a carbon source and plays a important role for selection of lactose fermenting microbes. Oxgall is selective agents, inhibit growth of gram-positive organisms. Bromocresol purple is pH indicator dye. Bromocresol purple is less inhibitory than crystal violet and neutral red. Lactose-fermenting organisms shows prominent growth and produce acid and gas, causing the medium to turn yellow. Non-fermenting organisms produce good growth but will not produce acid or gas.

Use: Recommended for cultivating gram-negative, lactose-fermenting bacilli in water and foods as a presumptive test for coliform organisms.

Contents*

| Ingredients | Gram/Litre |
|--------------------|------------|
| Peptone | 40.00 |
| Lactose | 20.00 |
| Oxgall | 10.00 |
| Bromocresol Purple | 0.02 |
| pH at 25°C | 7.4 ±0.2 |

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 70.00 grams in 1000 ml distilled water, boil to dissolve the medium completely and distribute in test tubes with inverted Durham tube. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and inoculate test sample aseptically.

Specimens types analyzed

Food, dairy and water samples, pharmaceutical samples, clinical and non-clinical samples. etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

| | |
|------------------------------------------|------------------------------------------------------|
| Appearance | Light beige colored free flowing, homogeneous powder |
| Reaction of 7.0% solution | 7.4 ±0.2 at 25 °C |
| pH | 7.20- 7.60 |
| Color and clarity of ready medium | Purple colored opalescent solution |
| Growth Promotion properties | Best at ≤ 100 CFU at 32-37 °C for 18-72 h |
| Indicative properties | Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h |
| Negative control | Performed using sterile distilled water |

Different Microbial Response

Culture characteristic are observed after an incubation at 33-37°C for 18-48 hrs.

| Organism | ATCC | Inoculum | Growth | Acid production | Gas production |
|------------------------------|-------|----------|-----------|----------------------------|----------------|
| <i>Escherichia coli</i> | 8739 | 50-100 | Luxurious | Yellow color (Positive) | Positive |
| <i>Staphylococcus aureus</i> | 25923 | 50-100 | Inhibited | --- | --- |

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

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