**OXFORD LAB FINE CHEM LLP**
ISO 9001-2008 Certified Company

**Regd Office:** Unit no 12, 1st Floor,
Neminath Industrial Estate No.6,
Navghar, Vasai (East), Palghar - 410210.
Maharashtra, INDIA.

**Tel:** +91 250 2390032 / 2390989 / 2390990
**Email:** sales@oxfordlabchem.com /
info@oxfordlabchem.com
**Web:** www.oxfordlabchem.com

Oxford
Range of
Laboratory Chemicals

# TECHNICAL DATA SHEET

# MacConkey Broth w/BCP (Double Strength)

## 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: For the presumptive identification of coliforms from water, milk and foods products.**

## Contents*

| Ingredients | Gram/Liter |
|---|---|
| Peptone | 40.00 |
| Lactose | 20.00 |
| Oxgall | 10.00 |
| Bromocresol | 0.02 |
| Purple 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.**

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## 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 ºC for 18-72 h** |
| **Indicative properties** | **Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h** |
| **Negative control** | **Performed using sterile distilled water** |

**Different Microbial Response: Cultural characteristics observed after incubation at 35±2°C for 18-24 hours. Inoculum 50-100 CFU.**

| Organism | ATCC | Growth | Acid production | Gas production |
|---|---|---|---|---|
| ***Escherichia coli*** | **8739** | **Luxuriant** | **Yellow color (Positive)** | **Positive** |
| ***Klebsiella aerogenes*** | **13048** | **Luxuriant** | **Yellow color (Positive)** | **Positive** |
| ***Salmonella typhimurium*** | **14028** | **Poor** | **No colour change (Negative)** | **Negative** |
| ***Staphylococcus aureus*** | **25923** | **Inhibited** | **---** | **---** |

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**Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.**

**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.**

# *Disclaimer:*

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