



## MacConkey Broth With Crystal Violet and Neutral Red

**RDM-MCB-02**

### Principle

MacConkey broth is composed of peptone, proteose peptone, lactose, bile salt, sodium chloride, neutral red and crystal violet. Peptone and proteose 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. Bile salt and crystal violet are selective agents, inhibit growth of gram-positive organisms. Neutral red is pH indicator dye. The lactose fermenting organisms turns medium purple to yellow.

**Use:** Recommended for differentiation of lactose fermenting and lactose non-fermenting gram-negative enteric bacilli from pharmaceutical, clinical and non-clinical samples, dairy, food and water samples.

### Contents\*

Ingredients	Gram/Litre
Peptone	17.000
Proteose Peptone	3.000
Lactose	10.000
Bile Salt	1.500
Sodium Chloride	5.000
Neutral Red	0.030
Crystal Violet	0.001
pH at 25°C	7.1 ±0.2

\* Formula adjusted for optimum performance and parameters

**Directions:** Dissolve 36.50 grams in 1000 ml distilled water, boil to dissolve the medium completely distribute aseptically in test tubes with inverted Durham's tube and 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

Pharmaceutical samples, clinical and non-clinical samples. food, dairy and water 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

<b>Appearance</b>	Light pink colored free flowing, homogeneous powder
<b>Reaction of 3.65% solution</b>	7.1 ±0.2 at 25 °C
<b>pH</b>	6.90- 7.30
<b>Color and clarity of ready medium</b>	Pink red colored opalescent solution

<b>Growth Promotion properties</b>	Best at $\leq 100$ CFU at 32-37 °C for 18-72 h
<b>Indicative properties</b>	Optimum at $\leq 100$ CFU at 32-37 °C for 18-48 h
<b>Negative control</b>	Performed using sterile distilled water

### Different Microbial Response

Organism	Inoculum	Growth	Lactose fermentation	Gas production	Incubation
<i>Escherichia coli</i> (ATCC 8739)	50-100	Luxurious	Purple to yellow (Positive)	Negative	33-37 °C, 18-48 h
<i>Salmonella typhimurium</i> (ATCC 14028)	50-100	Luxurious	No color changes (Negative)	Negative	33-37 °C, 18-48 h
<i>Staphylococcus aureus</i> (ATCC 25923)	50-100	Inhibited	---	----	33-37 °C, 18-48 h

### 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). 11<sup>th</sup> 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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