

## CM 21,121 - MacCONKEY BROTH W/ BCP

### INTENDED USE

For presumptive identification of coliforms from water, milk and foods.

### PRODUCT SUMMARY AND EXPLANATION

MacConkey Broth Purple w/ BCP is a modification of MacConkey Medium. Childs and Allen demonstrated the inhibitory effect of neutral red and therefore substituted it by the less inhibitory bromocresol purple dye. BCP is more sensitive in recording pH variation in the medium.

### COMPOSITION

| Ingredients         | Gms / Ltr |
|---------------------|-----------|
| Peptone             | 20.000    |
| Lactose             | 10.000    |
| Sodium taurocholate | 5.000     |
| Sodium chloride     | 5.000     |
| Bromocresol purple  | 0.010     |

### PRINCIPLE

The medium consists of Peptone which provides nitrogenous and carbonaceous compounds, long chain amino acids and other essential growth nutrients. Lactose is the fermentable carbohydrate. Sodium taurocholate inhibits gram-positive organisms. Sodium chloride maintains the osmotic balance of the medium. Bromocresol purple is the pH indicator in the medium which turns yellow under acidic condition. Lactose fermentation turns the medium yellow due to the acidity produced on lactose fermentation. The colour change of the dye is observed when the pH of the medium falls below 6.8. Lactose non-fermenting organisms like Salmonella and Shigella do not alter the appearance of the medium.

### INSTRUCTION FOR USE

Dissolve 40.01 grams in 1000 ml purified/distilled water.

Heat if necessary to dissolve the medium and distribute into test tubes with inverted Durham tubes.

Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

### QUALITY CONTROL SPECIFICATIONS

|                               |                                                                   |
|-------------------------------|-------------------------------------------------------------------|
| Appearance of Powder          | : Cream to yellow homogeneous free flowing powder.                |
| Appearance of prepared medium | : Purple coloured clear to slightly opalescent solution in tubes. |
| pH (at 25°C)                  | : 7.4±0.2                                                         |

### INTERPRETATION

Cultural characteristics observe after incubation.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Acid production | Gas production | Incubation Temperature | Incubation Period |
|---------------|------|-------------------|--------|-----------------|----------------|------------------------|-------------------|
|---------------|------|-------------------|--------|-----------------|----------------|------------------------|-------------------|



|                                     |       |             |           |                                  |                   |         |             |
|-------------------------------------|-------|-------------|-----------|----------------------------------|-------------------|---------|-------------|
| Klebsiella aerogenes                | 13048 | 50-100      | Luxuriant | Positive reaction, yellow colour | Positive reaction | 35-37°C | 18-24 Hours |
| Escherichia coli                    | 25922 | 50-100      | Luxuriant | Positive reaction, yellow colour | Positive reaction | 35-37°C | 18-24 Hours |
| Salmonella Choleraesuis             | 12011 | 50-100      | Fair-good | Negative reaction                | Negative reaction | 35-37°C | 18-24 Hours |
| Staphylococcus aureus subsp. aureus | 25923 | $\geq 10^3$ | Inhibited | -                                | -                 | 35-37°C | 18-24 Hours |
| Escherichia coli                    | 8739  | 50-100      | Luxuriant | Positive reaction, yellow colour | Positive reaction | 35-37°C | 18-24 Hours |
| Staphylococcus aureus subsp. aureus | 6538  | $\geq 10^3$ | Inhibited | -                                | -                 | 35-37°C | 18-24 Hours |

#### PACKAGING:

In pack size of 100 gm and 500 gm bottles.

#### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

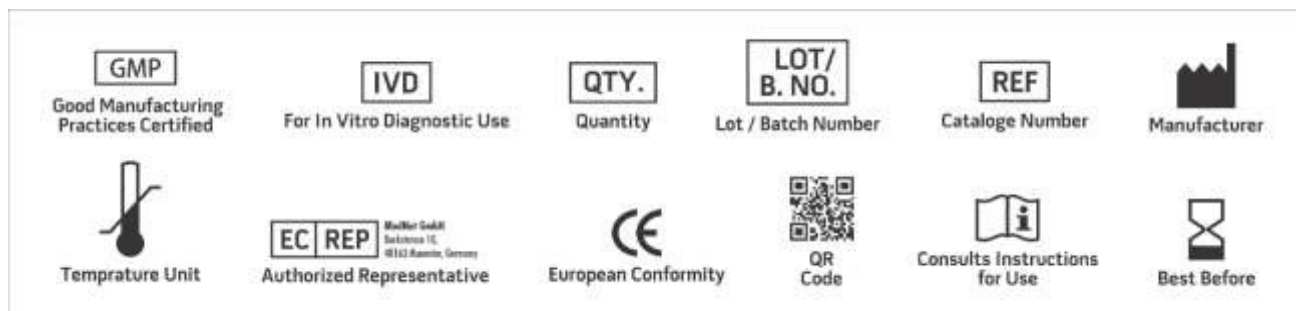
#### DISPOSAL

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

#### REFERENCES

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C
2. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. MacConkey A. T., 1900, The Lancet, ii: 20.





NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.  
\*For LabUse Only