

## CM 21,116 – MacCONKEY BROTH (as per USP/EP/JP/BP)

### INTENDED USE

For detection and enumeration of coliform bacteria.

### PRODUCT SUMMARY AND EXPLANATION

MacConkey Broth 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. United States pharmacopoeia has recommended this medium for the presumptive identification of coliforms from water and other materials of sanitary importance. This medium is prepared in accordance with the harmonized method of EP/BP/JP/IP.

### COMPOSITION

| Ingredients                  | Gms / Ltr |
|------------------------------|-----------|
| Pancreatic digest of gelatin | 20.000    |
| Lactose monohydrate          | 10.000    |
| Dehydrated ox bile           | 5.000     |
| Bromo cresol purple          | 0.010     |

### PRINCIPLE

Pancreatic digest of gelatin provides essential growth nutrients. Lactose is the fermentable carbohydrate. Dehydrated ox-bile inhibits gram-positive organisms. Bromocresol purple is the pH indicator in the medium, which turns yellow under acidic condition. Lactose fermenting organisms turn 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 35.01 grams of dehydrated medium in 1000 ml distilled water.

Heat to boiling to dissolve the medium completely.

Dispense into test tubes with inverted Durham tubes.

### 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

Growth Promotion is carried out in accordance with the method of USP. Cultural response was observed.

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



|                         |       |                   |           |        |                |          |             |
|-------------------------|-------|-------------------|-----------|--------|----------------|----------|-------------|
| Escherichia coli        | 25922 | 50-100            | luxuriant | >=70%  | +ve,yellow/+ve | 30 -35°C | 18-48 Hours |
| Enterobacter aerogenes  | 13048 | 50-100            | luxuriant | >=70%  | +ve,yellow/+ve | 30 -35°C | 18-48 Hours |
| Salmonella Choleraesuis | 12011 | 50-100            | fair-good | 40-50% | -ve/-ve        | 30 -35°C | 18-48 Hours |
| Staphylococcus aureus   | 25923 | >=10 <sup>3</sup> | inhibited | 0%     | -              | 30 -35°C | 18-48 Hours |

#### PACKAGING:

Inpacksizeof500 gm bottles.

#### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 10-25°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

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

#### REFERENCES

1. Atlas R. M., 1993, Handbook of Microbiological Media, Parks L.C. (Ed.), CRC press, Boca Raton.
2. Forbes B. A. et al, 2002, Bailey and Scotts Diagnostic Microbiology, 11th Ed., Mosby Company, St. Louis, MO.
3. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.

|                                                                                                                                  |                                                                                                                                                                                               |                                                                                                            |                                                                                                           |                                                                                                                           |                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <br>Good Manufacturing<br>Practices Certified | <br>For In Vitro Diagnostic Use                                                                            | <br>Quantity            | <br>Lot / Batch Number | <br>Catalogue Number                 | <br>Manufacturer |
| <br>Temperature Unit                          | <br>Authorized Representative<br><small>MedNet GmbH<br/>Barkstrasse 10,<br/>48163 Münster, Germany</small> | <br>European Conformity | <br>QR Code            | <br>Consults Instructions<br>for Use | <br>Best Before  |

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

\*For LabUse Only

