

## CM 20493 – COLIFORM BROTH, MODIFIED

### INTENDED USE

For the detection and confirmation of Escherichia coli and total coliforms from water samples, using a combination of chromogenic and fluorogenic substrates.

### PRODUCT SUMMARY AND EXPLANATION

Coliform Broth, Modified was designed for detection and confirmation of Escherichia coli and total coliforms from water samples using a combination of chromogenic and fluorogenic substrates. Escherichia coli can be distinguished from other coliforms by its unique ability to fluoresce in the presence of fluorogenic substrate. The fluorogenic substrate is split by enzyme  $\beta$ -glucuronidase especially present in Escherichia coli. The reaction is indicated by the development of a blue fluorescence under UV light. The presence of total coliforms is indicated by blue-green colouration due to the cleavage of the chromogenic substrate.

### COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Sodium chloride	5.000
Potassium sulfate	1.000
Dipotassium hydrogen phosphate	4.000
Potassium dihydrogen phosphate	1.000
Sodium lauryl sulphate	0.100
Sodium puruvate	1.000
Chromogenic substrate	0.100
Fluorogenic substrate	0.100
IPTG	0.100

### PRINCIPLE

The medium contains IPTG amplifies enzyme synthesis and increases the activity of beta -galactosidase. Peptone provides carbon, nitrogen substances, long chain amino acids, vitamins and other essential growth nutrients and is useful for the simultaneous detection of indole production. The phosphate salts provide buffering action for rapid growth of coliforms. Sodium chloride helps to maintain the osmotic balance. Sodium lauryl sulphate makes the medium selective by inhibiting accompanying microflora, especially the gram-positive organisms.

### INSTRUCTION FOR USE

- Dissolve 17.4 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Mix well and dispense in tubes or flasks as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.

### QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Cream to yellow homogeneous free flowing powder.  
 Appearance of prepared medium : Light yellow coloured, clear to slightly opalescent solution in tubes.  
 pH (at 25°C) : 6.8±0.2

### INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Flourescence	Colour of medium	Incubation Temperature	Incubation Period
Klebsiella aerogenes	13048	50-100	Luxuriant	Negative reaction	Blue-green	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Luxuriant	Positive reaction	Blue-green	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 2-8°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. 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.
2. Feng P.C.S. and Hartman P.A., 1982, J. Appl. Environmental Microbiol. 43. 1320-1323.
3. Harsen W., and Yourassowsky, 1984, J. Clin. Microbiol. 20. 1177-1179.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. 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.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Birkstrasse 10, 48143 Muenster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before



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

