

CM 21045 - M-E. COLI BROTH

INTENDED USE

For the detection, differentiation and enumeration of *Escherichia coli* and coliforms in water samples using membrane filter technique.

PRODUCT SUMMARY AND EXPLANATION

M-E. coli Broth is used for differentiation and detection of *Escherichia coli* and coliforms by membrane filter technique in water samples. For detection of *Escherichia coli* in foods Tryptone Bile Agar is used where recovery of *Escherichia coli* is faster, more reliable and accurate.

COMPOSITION

Ingredients	Gms / Ltr
Bile salt mixtures	1.500
Chromogenic mixtures	0.175
Tryptone	20.000

PRINCIPLE

Tryptone provides the essential growth nutrients to the organisms. Bile salts act as inhibitor of gram - positive organisms. The water sample is filtered through membranes and then placed on pad saturated with M-E. coli Broth and then incubated at 37°C in sealed Petri plates. Chromogenic mixture in medium helps to detect glucuronidase activity of *Escherichia coli*. The function of this specific enzyme is to differentiate *Escherichia coli* from other coliforms. Glucuronidase helps *Escherichia coli* cells to split the chromogenic mixture to give blue coloration to the colonies. Colonies turn red if organisms are Coliforms other than *Escherichia coli* due to reduction of TTC (2, 3, 5-triphenyl tetrazolium chloride). Therefore, the color distinction depicts simple interpretation of test without further confirmation.

INSTRUCTION FOR USE

Dissolve 21.67 grams in 1000 ml purified/ distilled water.

Heat the medium to dissolve completely, if necessary. Do not autoclave.

Cool to 45-50°C, aseptically add desired quantity (2 to 5 ml) of broth on sterile absorbent cotton pad for saturation.

The medium should be used within 24 hours of rehydration.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to beige homogeneous free flowing powder
Appearance of prepared medium	: Light yellow colored, clear solution without any precipitate
pH (at 25°C)	: 7.2 ± 2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of colony	Incubation Temperature	Incubation Period
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<i>Klebsiella aerogenes</i>	13048	50-100	Luxuriant	>=70%	Red	35-37°C	18-24 Hours
<i>Escherichia coli</i>	25922	50-100	Luxuriant	>=70%	Blue	35-37°C	18-24 Hours
<i>Staphylococcus aureus</i>	25923	>=10 ⁴	Inhibited	>=70%	-	35-37°C	18-24 Hours

PACKAGING:

Inpacksize 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

- Anderson J. M. and Baird Parker A.C., (1975), J. Appl. Bact., 39:111.
- 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.

 Good Manufacturing Practices Certified	 For In Vitro Diagnostic Use	 Quantity	 Lot / Batch Number	 Catalogue Number	 Manufacturer
 Temperature Unit	 Authorized Representative MedMet GmbH Barkstrasse 10, 48143 Münster, Germany	 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 Lab Use Only**

