

TM 2058 – EC BLUE BROTH

INTENDED USE

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

PRODUCT SUMMARY AND EXPLANATION

EC Blue Broth was designed for detection and confirmation of *Escherichia coli* and other coliforms. *Escherichia coli* can be distinguished from other coliforms by its unique ability to fluoresce in the presence of fluorogenic substrate. The fluorogenic substrate, MUG 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 bluegreen colourations due to the cleavage of the chromogenic substrate (X-Gal). IPTG amplifies enzyme synthesis and increases the activity of beta -galactosidase.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Sodium chloride	5.000
Sodium pyruvate	1.000
Potassium dihydrogen phosphate	1.000
Dipotassium hydrogen phosphate	4.000
Potassium nitrate	1.000
Sodium lauryl sulphate	0.100
IPTG	0.100
X-GAL	0.100
MUG	0.100

PRINCIPLE

The medium consists Peptone which provides 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 17.40 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Cream coloured clear solution having slight precipitate in tubes.
pH (at 25°C) : 7.1 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour change in medium	Fluorescence under UV light	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Bluish-green	Positive reaction	35-37°C	18-24 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	Luxuriant	Blue	Negative reaction	35-37°C	18-24 Hours
<i>Enterobacter aerogenes</i>	13048	50-100	Luxuriant	Blue	Negative reaction	35-37°C	18-24 Hours
<i>Citrobacter freundii</i>	8090	50-100	Luxuriant	Bluish-green	Negative reaction	35-37°C	18-24 Hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	Colourless	Negative reaction	35-37°C	18-24 Hours

PACKAGING:

In pack size of 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. Feng P.C.S. and Hartman P.A. ,1982, J.Appl. Environmental Microbiol. 43. 1320-1323.
2. Harsen W., and Yourassowsky, 1984, J.Clin. Microbiol.20.1177-1179.



 GMP Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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

***For Lab Use Only**
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