

TM 1236 - MUG TRYPTONE WATER

INTENDED USE

For detection of indole production by microorganisms using fluorogenic method.

PRODUCT SUMMARY AND EXPLANATION

Escherichia coli is a member of the faecal coliform group of bacteria, its presence is indicative of faecal contamination. The traditional IMViC tests are useful for coliform differentiation. The ability of certain microorganisms to breakdown tryptophan with the formation of indole is an important property for identification of bacteria. MUG is also added to detect indole producing microorganisms by fluorogenic method.

MUG Tryptone Water is used for detection of indole producing organisms by fluorogenic method. Organisms like *Escherichia coli* not only degrade tryptophan and produce indole but also possess the enzyme β -glucuronidase, which cleaves MUG to release 4-methylumbelliferone, which produces blue-green fluorescence under long wave UV light. Test tubes used should be checked under UV light to ensure the glass does not fluoresce.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Sodium chloride	5.000
4-Methylumbelliferyl β -D-Glucuronide (MUG)	0.050

PRINCIPLE

Casein enzymic hydrolysate serves as a source of essential nutrients and also serves as a source of tryptophan, the substrate for indole reaction. Sodium chloride maintains the osmotic equilibrium of the medium while MUG is the fluorogenic substrate.

INSTRUCTION FOR USE

- Dissolve 15.05 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense into 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	: Light yellow coloured clear solution without any precipitate.
pH (at 25°C)	: 7.5±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Fluorescence (under UV)	Incubation Temperature	Incubation Period
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<i>Escherichia coli</i>	25922	50-100	Luxuriant	Positive	35-37°C	18-24 Hours
<i>Enterobacter aerogenes</i>	13048	50-100	Luxuriant	Negative	35-37°C	18-24 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	Luxuriant	Negative	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. American Public Health Association, 1980, Standard Methods for the Examination of Water and Wastewater, 15th Ed., APHA, Inc., Washington, D.C.
2. Farmer J. J., Davis B. R., Hickman- Brenner F. W., McWhorter A., Huntley- Carter G. P., Asbury M. A., Riddle C., Wathen- hrady H. G., Elias C. and Fanning G. R., 1985, J. Clin. Microbiol., 21:46.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore

 Good Manufacturing Practices Certified	 For In Vitro Diagnostic Use	 Quantity	 Lot / Batch Number	 Catalogue Number	 Manufacturer
 Temperature Unit	 Authorized Representative	 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
Revision: 08 Nov., 2019