

TM 1846 – DEV TRYPTOPHAN BROTH

INTENDED USE

For sub cultivation of Coliform, differentiation & for indole testing in bacteriological examination of water.

PRODUCT SUMMARY AND EXPLANATION

Tryptone Water is recommended by APHA for detection of indole production by coliforms, which is a key feature in differentiation of bacteria. This test demonstrates the ability of certain bacteria to decompose the amino acid tryptophan to indole which accumulates in the medium. Indole testing is recommended as an aid in the differentiation of microorganisms based on indole production. For complete identification of the organisms, further biochemical confirmation is necessary. Certain microorganism's breakdown tryptophan with the help of the enzyme tryptophanase that mediate the production of indole by hydrolytic activity. The indole produced can be detected by Kovacs or Ehrlich's reagent. Indole combines with the aldehyde present in the above reagent to give red colour in the alcohol layer. The alcohol layer extracts and concentrates the red colour complex.

COMPOSITION

Ingredients	Gms / Ltr
Meat peptone	10.000
Sodium chloride	5.000
DL-Tryptophan	1.000

PRINCIPLE

The medium consists of Meat peptone which provides necessary nitrogen, carbon sources, vitamins, growth factors and also trace ingredients to non-fastidious organisms. Sodium chloride maintains osmotic equilibrium of the medium. DL-Tryptophan is an amino acid, which serves as a substrate to study indole reaction.

INSTRUCTION FOR USE

- Dissolve 16 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15psi pressure (121°C) for 15 minutes.
- Mix well and dispense into tubes or flasks as desired.

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.
pH (at 25°C)	: 7.2 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Indole reaction	Incubation Temperature	Incubation Period

<i>Escherichia coli</i>	25922	50-100	Luxuriant	Positive reaction, red ring at the interface of the medium	35-37 °C	18-48 Hours
<i>Klebsiella aerogenes</i>	13048	50-100	Luxuriant	Negative reaction, no colour development / cloudy ring	35-37 °C	18-48 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	Luxuriant	Negative reaction, no colour development / cloudy ring	35-37 °C	18-48 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 25-30°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

- Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone.
- Finegold S. M. and Baron E. J., 1986, Bailey and Scotts Diagnostic Microbiology, 7th Ed., The C.V. Mosby Co., St. Louis.
- Greenberg A. E., Clesceri L. S. and Eaton A. D., (Eds.), 1998, Standard Methods for the Examination of Water and Wastewater, 20th Ed., APHA, Washington, D.C.
- MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. 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
Revision: 08 Nov., 2019