



# Technical Data

## Tryptone Broth, HiVeg™ (Tryptone Water, HiVeg™)

MV463

### Intended use

Tryptone Broth, HiVeg™ (Tryptone Water, HiVeg™) is used for the detection of indole producing microorganisms.

### Composition\*\*

Ingredients	Gms / Litre
HiVeg™ hydrolysate	10.000
Sodium chloride	5.000
Final pH ( at 25°C)	7.5±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

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

### Principle And Interpretation

Tryptone Broth, HiVeg™ is prepared by using HiVeg™ Hydrolysate in place of tryptone which makes the medium free of BSE/TSE risks. HiVeg™ hydrolysate is a good substrate for indole production because of its high tryptophan content. Thus it can be used as an alternative of tryptone. Tryptone Water is recommended by APHA (1) for detection of indole production by coliforms, which is a key feature in differentiation of bacteria. A slight modification of Tryptone Water (M463I) is recommended by ISO committee (4) for the same purpose. This test demonstrates the ability of certain bacteria to hydrolyze the amino acid tryptophan to indole mediated by suitable enzymes. Liberated indole gets accumulated in the medium (2). The indole produced can be detected by either Kovac's or Ehrlich's reagent (3). 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. Tryptone Water HiVeg™ can be used in conjunction with Brilliant Green Bile HiVeg™ Broth 2% (MV121) to determine the most probable number (MPN) of *E.coli* in food sample. Growth and gas production in MV121 and indole production in Tryptone water HiVeg™ following incubation of both media at  $44 \pm 1^\circ\text{C}$  is used as the basis for the presumptive *E.coli* test. For determination of indole, inoculate the medium with inoculum of an 18-24 hours pure culture. Incubate the tubes at  $35 \pm 2^\circ\text{C}$  for 18-24 hours. Add 0.5 ml of indole reagent (R008) directly to the tube and agitate. Allow the tubes to stand for 5-10 minutes. Formation of red ring at the top of the tube indicates indole production. 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.

### Type of specimen

Water samples, Clinical samples- Faeces, Urine.

### Specimen Collection and Handling:

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (1). For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6). After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions

In Vitro diagnostic Use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations :

1. Biochemical confirmation is necessary for complete identification of the organisms.

Please refer disclaimer Overleaf.

## Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

### Appearance

Cream to yellow homogeneous free flowing powder

### Colour and Clarity of prepared medium

Yellow coloured clear solution

### Reaction

Reaction of 1.5% w/v aqueous solution at 25°C. pH : 7.5±0.2

### pH

7.30-7.70

### Cultural Response

Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

Organism	Inoculum (CFU)	Growth	Indole production
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant	Positive, red ring at the interface of the medium
# <i>Klebsiella aerogenes</i> ATCC 13048 (00175*)	50-100	luxuriant	Negative, no colour development / cloudy ring
<i>Klebsiella pneumoniae</i> ATCC 13883 (00097*)	50-100	luxuriant	Negative, no colour development / cloudy ring

Key : (#) Formerly known as *Enterobacter aerogenes* (\*) Corresponding WDCM numbers.

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

## Reference

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- Finegold S. M. and Baron E. J., 1986, Bailey and Scotts Diagnostic Microbiology, 7th Ed., The C.V. Mosby Co., St. Louis
- International Organization for Standardization (ISO), 1990, Draft ISO/DIS 7251:1993.
- Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2<sup>nd</sup> Edition.
- 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.

7. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Williams and Wilkins, Baltimore.

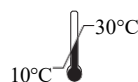
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*In vitro* diagnostic  
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Storage temperature



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