

Peptone water**(M1610)**

Recommended for detection of indole production by microorganisms and enumeration of presumptive *Escherichia coli*.

Composition

Ingredients	g/ L
Tryptone	10.00
Sodium chloride	5.000

Description

Peptone Water is recommended 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.

Tryptone is a good substrate for indole production because of its high tryptophan content. Certain organisms breakdown the amino acid tryptophan with the help of enzymes that mediate the production of indole by hydrolytic activity. The indole produced can be detected by either Kovacs or Ehrlichs reagent. Indole combines with the aldehyde present in the above reagent to give red colour in the alcoholic layer. The alcohol layer extracts and concentrates the red colour complex.

Incubate the tubes at $35 \pm 2^{\circ}\text{C}$ for 18-24 hours. Add 0.5 ml of indole reagent directly to the tube and agitate. Allow the tubes to stand for 1 minute. Formation of red ring at the top of the tube indicates indole production.

Type of specimen

Isolated microorganisms

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines. After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. For professional 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.

Limitations

1. For complete identification of the organisms, further biochemical confirmation is necessary.

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**Physical/Chemical control**

Color : Yellow coloured clear solution without any precipitate

pH: 7.10-7.50

Cultural Response

Cultural characteristics observed after an incubation at $35-37^{\circ}\text{C}$ for 18-24 hours.

Microbiological activity

Organisms	Inoculum CFU/ml	Growth
Escherichia coli ATCC 25922	50-100	Positive reaction red ring formation
Pseudomonas aeruginosa ATCC 27853	50-100	Negative reaction, no colour development

Storage and Shelf Life ,

Store between 2-25°C. Use before expiry date on the label. 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. 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.
3. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Williams and Wilkins, Baltimore.