

TECHNICAL DATA SHEET

PEPTONE WATER

CONFIRMATION OF *ESCHERICHIA COLI*

1 INTENDED USE

Peptone water is used for the culture of microorganisms with no particular growth requirements. This media is specifically used for the Mackenzie test for the identification of *Escherichia coli* via indole production. The typical composition of the media responds to the composition defined in the standards NF ISO 7251, in food microbiology for the detection and enumeration of presumptive *E. coli* by MPN technique.

2 PRINCIPLES

Under aerobic conditions, *Escherichia coli* degrade tryptophan to indole through the action of a tryptophanase. The indole that is produced is detected using Kovacs reagent.

3 TYPICAL COMPOSITION

The composition can be adjusted in order to obtain optimal performance.

For 1 liter of media :

- Tryptone 10,0 g
- Sodium chloride 5,0 g

pH of the ready-to-use media at 25°C : 7,3 ± 0,2.

4 PREPARATION

- Dissolve 15,0 g of dehydrated media (BK084) in 1 liter of distilled or demineralized water.
- Stir slowly until complete dissolution.
- Divide into tubes, at 5 to 10 mL per tube.
- Sterilize in an autoclave at 121 °C for 15 minutes.
- Cool to room temperature.

✓ **Reconstitution :**
15,0 g/L

✓ **Sterilization :**
15 min at 121 °C

5 INSTRUCTIONS FOR USE

- Transfer a loop of enrichment broth to a pre-heated tube (44°C) of Peptone broth.
- Incubate at 44 ± 1 °C for 48 hours.
- Add 0.5 mL of indole reagent and mix well.
- Observe the tube after 1 minute.

✓ **Inoculation :**
one loop of broth

✓ **Incubation :**
48 h at 44°C

6 RESULTS

The appearance of a red color in the alcoholic upper phase of the tube indicates the presence of indole and confirms the identity of *Escherichia coli*. In the event of a negative reaction, the ring remains brownish (original color of the reagent).

7 QUALITY CONTROL

Dehydrated media : white-cream powder, free-flowing and homogeneous.

Prepared media : clear, limpid amber solution.

Typical culture response after 24 hours incubation at 44 °C

Microorganisms		Growth	Indole production
<i>Escherichia coli</i>	WDCM 00013	Good, score 2	Positive
<i>Escherichia coli</i>	WDCM 00012	Good, score 2	Positive
<i>Escherichia coli</i>	WDCM 00179	Good, score 2	Positive
<i>Salmonella</i> Typhimurium	WDCM 00031	Good, score 2	Negative

8 STORAGE / SHELF LIFE

Dehydrated media : 2-30 °C.

The expiration date is indicated on the label.

Prepared media in tubes (*) : 180 days at 2-25 °C.

(*) Benchmark value determined under standard preparation conditions, following manufacturer's instructions.

9 PACKAGING

Dehydrated media :

500 g bottle BK084HA

10 BIBLIOGRAPHY

Rodier, J. 1984. L'analyse de l'eau. Dénombrement des coliformes, coliformes fécaux et *Escherichia coli* présumés. Dunod 7ème Ed., 793-798.

Marchal, N., Bourdon, J.L., et Richard, Cl. 1987. Les milieux de culture pour l'isolement et l'identification biochimique des bactéries. Doin Ed., 144-147.

NF ISO 7251. Juillet 2005. Microbiologie des aliments. Méthode horizontale pour la recherche et le dénombrement d'*Escherichia coli* présumés. Technique du nombre le plus probable.

11 ADDITIONAL INFORMATION

The information provided on the labels take precedence over the formulations or instructions described in this document and are susceptible to modification at any time, without warning.

Document code : PEPTONE WATER_ENv7.

Creation date : 04-2001

Updated : 05-2016

Origin of revision : General update.