

# 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

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**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

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**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

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**Dehydrated media** :

500 g bottle ..... BK084HA

## 10 BIBLIOGRAPHY

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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

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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.

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