

PEPTONE WATER with LACTOSE ISO 9308-1

CAT Nº: 1357

For the coliforms presence confirmation in water

FORMULA IN g/l

Peptone	10.00	Sodium Chloride	5.00
Lactose	10.00	Phenol Red	0.01

Final pH 7.5 ± 0.2 at 25°C

PREPARATION

Suspend 25 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into tubes with Durham gas collecting tubes for gas detection. Sterilize in autoclave at 121°C for 15 minutes. The prepared medium should be stored at 2-8°C. The color is red.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

USES

Peptone water with Lactose is used for the confirmation of coliform presence in a water.

Peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Lactose is the fermentable carbohydrate providing carbon and energy. Phenol red is a pH indicator and Sodium chloride supplies essential electrolytes for transport and osmotic balance.

Coliforms ferments lactose with gas and acid production. Acid formation changes the pH of medium with a resulting color change from red to yellow. When lactose is not fermented the color of medium remains red.

Incubate at a temperature of 37 ± 1°C and observe after 24-48 hours.

Gas production is demonstrated by the displacement of the medium from the Durham tube. Production of both acid and gas is a presumptive indication of the presence of coliforms.

MICROBIOLOGICAL TEST

The following results were obtained from type cultures in the performance of the medium after incubation at a temperature of 37± 1°C and observed after 24-48 hours.

Microorganisms	Growth	Medium Color	Gas
<i>Escherichia coli</i> ATCC 25922	Good	Yellow	+
<i>Proteus mirabilis</i> ATCC 29906	Good	Red	-

BIBLIOGRAPHY

ISO 9308-1 standards Detection and enumeration of *Escherichia coli* and coliform bacteria -- Part 1: Membrane filtration method



STORAGE

Once opened keep powdered medium closed to avoid hydration.

