

Peptone Water with Lactose

Cat. 1357

For the coliforms presence confirmation

Practical information

Applications	Categories
Confirmation	Coliforms

Industry: Water

Principles and 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.

Formula in g/L

Lactose	10	Peptone	10
Phenol red	0,01	Sodium chloride	5

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.

Instructions for use

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.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Beige	Red	$7,5 \pm 0,2$

Microbiological test

Incubation conditions: (37 ± 1 °C / 24-48 h)

Microrganisms	Specification	Characteristic reaction
Escherichia coli ATCC 25922	Good growth	Medium color: Yellow. Gas (+)
Proteus mirabilis ATCC 29906	Good growth	Medium color: Red. (-)

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

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

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