



Peptone Water | AS-1323

Used for cultivating non-fastidious organisms, for studying carbohydrate fermentation patterns and performing the indole test.

A versatile basal medium, peptone water is mostly used to cultivate microorganisms. Because of its peptone-rich nature, it is particularly appropriate for research on the production of indole. The addition of Kovacs' or Ehrlich's reagent makes it easier to identify indole because tryptophan is present in the peptone.

Furthermore, studies for the fermentation of carbohydrates are performed using Peptone Water. The addition of carbohydrates and a pH indicator such as phenol red and the use of Durham tubes to detect the creation of acid and, in particular conditions, the formation of gas.

When the medium's pH increases to 8.4, it can be used to cultivate and enrich *Vibrio* species. Essential sources of carbon and nitrogen are supplied by peptone, and the osmotic equilibrium is preserved by sodium chloride.

Peptone water, also known as tryptone water, is frequently used in indole production assays on water and food samples to identify *Enterobacteriaceae*, which includes *Escherichia coli*.

Composition (gr/L)

Peptone	10
Sodium chloride	5
Final pH at 25°C	7.3 ± 0.2

Preparation

Dissolve 15 g of the powder into 1 liter distilled water. Autoclave for 15 minutes at 121 °C.

NOTE: if you want to Determine Carbohydrate Fermentation Patterns, add 1.8 mL 1% phenol red solution to 1 liter rehydrated Peptone Water. Mix well. Dispense into test tubes containing inverted Durham tubes. Autoclave at 121°C for 15 minutes. In aseptic condition add sufficient sterile carbohydrate solution to yield a 1% final concentration. Rotate tubes to distribute the carbohydrate.

Quality Control

Dehydrated Appearance: White to light beige, free flowing, homogeneous.

Prepared Appearance: Light to medium amber, clear to slightly opalescent.

Reaction of 1.5% Solution at 25°C: pH 7.3 ± 0.2

Microbial Test Results

Incubate at 35 ± 2 °C for 18 to 24 hours. For performing indole test, add 0.5 mL Indole Reagent (Kovacs) to the tubes. Formation of a red ring indicates a positive indole test.

Organism (ATCC)	Recovery	Indole Production
<i>Enterobacter cloacae</i> (13047)	Good	-
<i>Escherichia coli</i> (25922)	Good	+

Storage

Keep the container at 15-30 °C and prepared medium at 2-8 °C.