Peptone Water (NCM0096)

Intended Use
Peptone Water is used for the cultivation of non-fastidious microorganisms, indole testing, and as a basal medium for carbohydrate fermentation studies. Peptone Water is not intended for use in the diagnosis of disease or other conditions in humans.

Description
A general purpose growth medium that can be used as a base for carbohydrate fermentation studies. The medium has a high level of tryptone making it suitable for use in the indole test.

Typical Formulation
Peptone	10.0 g/L
Sodium Chloride	5.0 g/L

pH: 7.2 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution
Refer to SDS

Preparation
1. Dissolve 15 grams of the medium in one liter of purified water.
2. Mix thoroughly and dispense into final containers.
3. Autoclave at 121°C for 15 minutes.
4. If sterile additions are to be made to this medium e.g. carbohydrates, the volume of water for reconstitution must be reduced accordingly.
5. A pH indicator may be added to detect acid production from carbohydrate utilization.

Test Procedure
Carbohydrate Fermentation
Inoculate tubes with test organism. Incubate tubes at 35 ± 2°C for 18 - 48 hours. Observe for color change if a pH indicator has been added.

Indole Test
Using aseptic technique, suspend the commercially available Indole Test Strip 100 mm above the surface of a 24 or 48 hour culture. Incubate at 37°C for 5 - 30 minutes.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing, and beige.

Prepared Appearance: Prepared medium is yellow, clear, with no precipitate.

Expected Cultural Response: Cultural response in Peptone Water incubated aerobically at 37 ± 1°C and *Escherichia coli* at 44 ± 1°C and examined for growth at 18-24 hours.

Effective Date: 2/15/2019
Revision: 0

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		Expected Results	
Microorganism	**Approx. Inoculum (CFU)**	**Growth**	**Indole Rxn**
Escherichia coli ATCC® 25922	10-100	Growth	Positive
Salmonella typhimurium ATCC® 14028	>1000	Growth	Negative
Staphylococcus aureus ATCC® 25923	10-100	Growth	Negative

The organisms listed are the minimum that should be used for quality control testing.

Results

Carbohydrate Fermentation Patterns

Acid is produced when carbohydrates are fermented. This is indicated by a yellow color in the medium. Gas production is indicated by the presence of gas bubbles in the Durham tube.

Indole Test

Observe for the formation of a violet color on the strip indicating a positive test for indole production.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitation of the Procedure

Due to varying nutritional requirements, some strains may be encountered that grow poorly or fail to grow on this medium.

Storage

Store dehydrated culture media at 2 – 30°C away from direct sunlight. Once opened and recapped, place the container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. Bergey's Manual of Systematic Bacteriology, Vol. 1, (1984). Williams and Wilkins, Baltimore / London.
2. MacFadden, J.F. (1983). Biochemical Tests for the Identification of Medical Bacteria, 2nd ed. Williams and Wilkins, Baltimore/London.

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