

Peptone Water**M028**

Peptone Water is used as a growth medium and as a base for carbohydrate fermentation media.

Composition**

| Ingredients | Gms / Litre |
|--------------------------------|-------------|
| Peptic digest of animal tissue | 10.000 |
| Sodium chloride | 5.000 |
| Final pH (at 25°C) | 7.2±0.2 |

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 15.0 grams in 1000 ml distilled water. Add the test carbohydrate in desired quantity and dissolve completely.

Dispense in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Peptone Water is particularly suitable as a substrate in the study of indole production. Peptic digest of animal tissue used in Peptone Water is rich in tryptophan content. Presence of indole can be demonstrated using either Kovacs or Ehrlich reagent. Peptone Water is also utilized as a base for carbohydrate fermentation studies with the addition of sugar and indicators such as bromocresol purple, phenol red or bromothymol blue.

Peptone Water is useful for cultivation of non-fastidious organisms (1). Peptone water is formulated as per Shread, Donovan and Lee (4). Peptone Water with pH adjusted to 8.4 is suitable for the cultivation and enrichment of *Vibrio* species.

Peptic digest of animal tissue provides essential nutrients. Sodium chloride maintains the osmotic balance of the medium

Quality Control**Appearance**

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured clear solution without any precipitate

Reaction

Reaction of 1.5% w/v aqueous solution at 25°C. pH : 7.2±0.2

Cultural Response

M028: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

| Organism | Inoculum (CFU) | Growth | Indole test | | | |
|--|----------------|-----------|---|--|--|--|
| <i>Escherichia coli</i> ATCC 25922 | 50-100 | luxuriant | positive reaction, red ring at the interface of the medium on addition of Kovac's reagent (R008) | | | |
| <i>Salmonella Typhimurium</i> ATCC 14028 | 50-100 | luxuriant | negative reaction, no red ring at the interface of the medium on addition of Kovac's reagent (R008) | | | |

| | | | | | | |
|--|--------|-----------|---|--|--|--|
| <i>Staphylococcus aureus</i> ATCC 25923 | 50-100 | luxuriant | negative reaction, no red ring at the interface of the medium on addition of Kovac's reagent (R008) | | | |
|--|--------|-----------|---|--|--|--|

Reference

1. MacFaddin J., 1980, Biochemical Tests for Identification of Medical Bacteria, 2nd ed., Williams and Wilkins, Baltimore.
2. Shread P., Donovan T.J, and Lee J.V, (1981), Soc. Gen, Microbiol. Q., 8, 184.

Storage and Shelf Life

Store below 30°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.