Dehydrated Culture Media
Bases / Media Supplements

# Technical Information

## Peptone Water

## Product Code: DM1028

**Application:-** 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 (25°C) | 7.2±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Principle & Interpretation

Peptone Water is 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 Ehlrich 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 or Andrad's indicator [1-2].

Peptone water is formulated as per the method of 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. To study the fermentation ability of carbohydrates, saccharose, rhamnose, salicin are generally added in 0.5% amount separately to the basal medium before or after sterilization. The acidity formed during fermentation can be detected by addition of phenol red indicator, which shows a colour change of the medium from red to yellow under acidic conditions. If desired, Durhams tube may be used to detect the gas production if produced.

## Methodology

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

Shake well & Dispense in tubes with or without inverted Durhams tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

## Quality Control

**Physical 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

**pH range** 7.00-7.40

**Cultural Response/ characteristices**

DM 1028: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

| Organism | Inoculum (CFU) | Growth | Indole test |
|---|---|---|---|
| Escherichia coli ATCC 25922 | 50-100 | luxuriant | positive reaction, red ring at the interface of the medium on addition of Kovac's reagent (025046) |
| Salmonella Typhimurium ATCC 14028 | 50-100 | luxuriant | negative reaction, no red ring at the interface of the medium on addition of Kovac's reagent (025046) |
| Staphylococcus aureus ATCC 25923 | 50-100 | luxuriant | negative reaction, no red ring at the interface of the medium on addition of Kovac's reagent (025046) |

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
**Prepared Media**: 2-8$^{o}$ in sealable plastic bags for 2-5 days.

## Further Reading

1. MacFaddin J., 1980, Biochemical Tests for Identification of Medical Bacteria, 2nd ed., Williams and Wilkins, Baltimore.
2. Finegold and Baron, 1986, Bailey and Scotts Diagnostic Microbiology, 7th ed., The C.V. Mosby Co., St. Louis.
3. Lennette and others (Eds.), 1985, Manual of Clinical Microbiology, 4th ed, ASM, Washington, D.C.
4. Shread P., Donovan T.J, and Lee J.V, (1981), Soc. Gen, Microbiol. Q., 8, 184.

## Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.
- Do not use the products if it fails to meet specificatons for identity and performens parameters.