Peptone Water

Intended Use
Peptone Water is a non-selective medium used for cultivating non-fastidious organisms and a base for carbohydrate fermentation media.

Summary
Peptone Water is used for biochemical tests such as determining carbohydrate fermentation pattern, which help in differentiation of genera and species. With the pH adjusted to 8.4 it is suitable for the cultivation and enrichment of *Vibrio cholerae*. Peptone Water may be modified by adding Andrade indicator and the test carbohydrate to detect the fermentation reactions.

Principle
Peptone provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and essential nutrients. Sodium chloride maintains the osmotic balance of the medium. 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, Durham's tube may be used to detect the gas production if produced. To detect indole production, add 0.5 mL of Kovac's reagent to the tube and shake the tube gently. Appearance of a red colour indicates presence of indole.

Formula*

Ingredients	**g/L**
Peptone	10.0
Sodium Chloride	5.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 15.00 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Warm slightly with frequent agitation to dissolve the powder completely.
4. Dispense in tubes with or without Durham's tubes as desired.
5. Sterilize by autoclaving 121°C (15 psi) for 15 minutes as per validated cycle.
6. Aseptically add sterile carbohydrate solution to yield a 1% final concentration. Rotate the tubes thoroughly to distribute the carbohydrate.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Light yellow coloured, clear solution without any precipitate.
Cultural Response: Cultural characteristics observed after an incubation of 18 - 24 hours at 35°C-37°C.

Organisms (ATCC)	Growth	Indole Test
Escherichia coli (25922)	Good	Positive reaction, Red ring at the interface of the medium
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (23564)	Good	Negative reaction, No red ring at the interface of the medium
Staphylococcus aureus subsp. *aureus* (25923)	Good	Negative reaction, No red ring at the interface of the medium

Interpretation of Results

Acid is produced when carbohydrates are fermented which is indicated by a pink colour in the medium and gas production is detected by formation of gas bubbles in the Durham's tubes.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Precautions / Limitations

1. A pure culture in Peptone Water is a convenient inoculum.
2. Each tube of Peptone Water with carbohydrate should be correctly coded for the contained carbohydrate.
3. Peptone Water with Andrade indicator is reddish-pink when hot; and should return to a colourless or slightly pink colour when cooled to room temperature.
4. Some sugar solutions may affect the pH of Peptone Water, which must be checked and corrected.
5. It may be required to make subcultures to ensure purity of the inoculum since mixed or contaminated cultures may give false reactions.
6. Andrade indicator may fade on prolonged storage; do not use beyond expiry period.
7. It is advisable to maintain cultures of organisms, which have known positive and negative reactions in each sugar. Using fresh sub-cultures test each batch of sugar media with the appropriate organisms.
8. *Vibrio* species should not be incubated longer than 18-20 hours as it may lead to development of suppressed forms.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Warranty

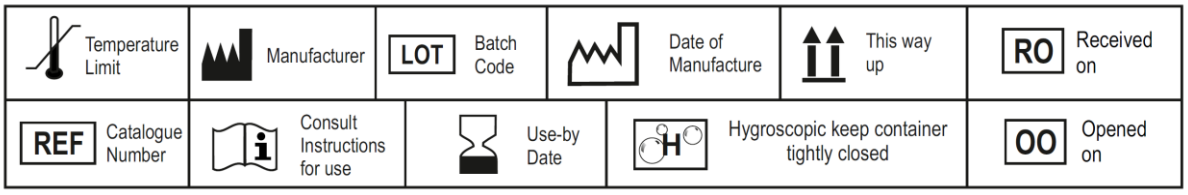
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Macfaddin J., 1980, Biochemical Tests for Identification of Medical Bacteria, 2nd ed., Williams and Wilkins, Baltimore.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201160020100	Dehydrated Culture Media	100 g
201160020500	Dehydrated Culture Media	500 g
203160450005	Ready Prepared Tube	50 x 5 mL
203160450099	Bottle Media	99 mL



Revision: 0825/VER-03

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.