

TECHNICAL DATA SHEET

Buffered Peptone Water

Principle

Buffered peptone water is composed of peptone, sodium chloride, sodium phosphate dibasic and monobasic potassium phosphate. Peptone, serves the source of nitrogen, carbon and other growth factors. Dibasic sodium phosphate and monobasic potassium phosphate acts as buffering agents and sodium chloride maintains the osmotic balance. Buffered peptone water is designed to help recovery of the sub-healthy or damaged *Salmonella* from processed food samples before transferring to selective medium. Buffered peptone water has shown higher recovery of *Salmonella* than that of the Lactose broth.

Use: For pre-enrichment of injured *Salmonella* species from foods prior to selective enrichment & isolation.

Contents*

Ingredients	Gram/Litre
Peptone	10.000
Sodium Chloride	5.000
Dibasic Sodium Phosphate	3.500
Monobasic Potassium Phosphate	1.500
pH at 25°C	7.2 ±0.2

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 20.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, and inoculate test sample aseptically.

Specimens' types analyzed

Pharmaceutical samples, clinical and non-clinical samples such as water samples, food, dairy, animal feed and meat samples etc.

OXFORD LAB FINE CHEM LLP

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Regd Office: Unit no 12, 1st Floor,
Neminath Industrial Estate No.6,
Navghar, Vasai (East), Palghar - 410210.
Maharashtra, INDIA.

Tel: +91 250 2390032 / 2390989 / 2390990
Email: sales@oxfordlabchem.com /
info@oxfordlabchem.com
Web: www.oxfordlabchem.com



Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Cream to light tan colored free flowing, homogeneous powder
Reaction of 2.0% solution	7.2±0.2 at 25 °C
pH	7.00- 7.40
Color and clarity of ready medium	Light amber, clear solution
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Cultural characteristics observed after an incubation at 35 ± 2°C for 18-48 hours

Organism	Inoculum	Growth	Recovery	Incubation Temperature	Incubation period
<i>Salmonella typhimurium</i> (ATCC 14028)	50-100	Luxurious	60-70%	33-37 °C	18-48 h
<i>Escherichia coli</i> (ATCC 8739)	50-100	Luxurious	60-70%	33-37 °C	18-48 h

* Recovery on Tryptone soy agar

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.
2. Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), Standard methods for the examination of water and wastewater. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.
4. APHA Inc., Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., Washington, D.C.

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