Buffered Peptone Water with NaCl

Intended Use
Buffered Peptone Water with NaCl is used as a diluent for carrying out microbial limit test from clinical and non-clinical specimens.

Summary
Buffered Peptone Water (BPW) is one of the most widely used pre-enrichment broths for *Salmonella* in a wide range of foods. Moreover, it is often the medium of choice in many published reference methods, including the current International Organization for Standardization (ISO) method, for detection of *Salmonella* in foods.
Edel and Kampelmaacher in their comparative study observed that food preservation methods cause sublethal injury to Salmonellae. It is known that freezing and drying may injure Salmonellae so that they are unable to multiply in selective media.
Pre-enrichment of sublethally injured Salmonellae in buffered peptone water showed superior results in comparison with direct selection methods. In addition to providing conditions for the recovery and growth of cells prior to selective enrichment, BPW buffers the pH of the growth system against pH changes brought about by the growth and metabolism of microorganisms during enrichment and those imposed by the food sample.

Principle
Peptone serves as a source of carbon, nitrogen, vitamins and minerals. Sodium chloride provides sodium ions for the membrane transport and maintains osmotic equilibrium of the medium. Phosphates buffer the medium.

Formula*
Ingredients	**g/L**
Peptone	1.0
Sodium Chloride	4.3
Disodium Hydrogen Phosphate	7.23
Potassium Dihydrogen Phosphate	3.56
Final pH (at 25°C)	7.0 ± 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 16.09 g of powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Warm slightly with frequent agitation to dissolve the powder completely.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Note: To this solution surface active agents or inactivators of antimicrobial agent may be added before autoclave, such as: Polysorbate 80 or Polysorbate 20 in 1-10 g/L.

Quality Control

Dehydrated Appearance: Cream to light yellow coloured, homogeneous, free flowing powder.
Prepared Appearance: Colourless to light yellow coloured, clear solution without any precipitate.
Cultural Response: Cultural characteristics is observed after recovery on Soyabean Casein Digest Agar, (incubated at 30°C - 35°C for 18-24 hours) for bacteria and on Sabouraud Dextrose Agar (at 20°C - 25°C for 48 - 72 hours) for fungal growth.

Organisms (ATCC)	**% Survival after 2 hours (Stored at 18°C - 22°C)**	**% Survival after 24 hours (Stored at 2°C - 8°C)**
Escherichia coli (8739)	≥ 100 %	≥ 100 %
Staphylococcus aureus subsp. *aureus* (6538)	≥ 100 %	≥ 100 %
Pseudomonas aeruginosa (9027)	≥ 100 %	≥ 100 %
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (14028)	≥ 100 %	≥ 100 %
Salmonella enterica subsp. *enterica* serovar *Abony* (NCTC 6017)	≥ 100 %	≥ 100 %
Bacillus spizizenii (6633)	≥ 100 %	≥ 100 %
Candida albicans 3147 (10231)	≥ 100 %	≥ 100 %
Aspergillus brasiliensis WLRI 034(120) (16404)	≥ 100 %	≥ 100 %

Note: Inoculum cfu is ≤ 100

Performance and Evaluation

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

1. Directions
2. Storage
3. Expiry

Warranty

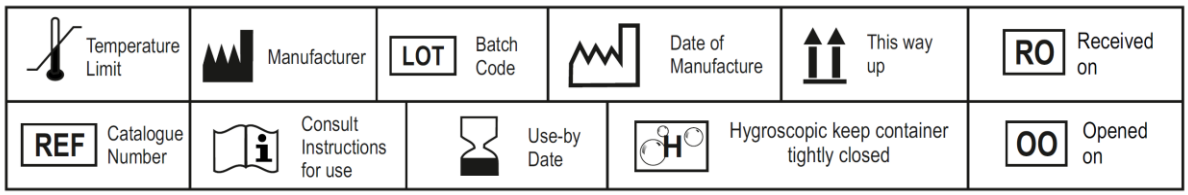
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Sadovski, 1977, J. Food Technol., 12:85.
2. Juven, Cox, Bailey, Thomson, Charles and Schutze, 1984, J. Food Prot., 47:299.
3. Angelotti, 1963, Academic Press, New York, N.Y. 5. Indian Pharmacopoeia, 1997, Ministry of Health and Family Welfare,Govt. of India, Vol. 2.
4. European Pharmacopoeia, 2008, European Directorate for The Quality of Medicine.
5. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201020410100	Dehydrated Culture Media	100 g
201020410500	Dehydrated Culture Media	500 g



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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.