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Instructions For Use
ENGLISH

# Buffered Peptone Water

Diluent and non-selective pre-enrichment liquid medium for microbiological examination of food, according to ISO 6887,11290, 21528 and 6579.

## DESCRIPTION

Buffered Peptone Water is a liquid medium recommended by ISO 6579 for increasing the recovery of injured *Salmonella* spp. from food and associated samples prior to selective enrichment and isolation.

According to ISO 21528, Buffered Peptone Water is used for detection or enumeration of Enterobacteriaceae within foodstuffs.

Used as diluent, Buffered Peptone Water complies with ISO 6887 and 11290 for the enumeration of organisms.

| TYPICAL FORMULA | (g/l) |
|---|---|
| Enzymatic Digest of Casein | 10.0 |
| Sodium Chloride | 5.0 |
| Disodium Hydrogen Phosphate | 3.5* |
| Potassium Dihydrogen Phosphate | 1.5 |

Final pH 7.0 ± 0.2 at 25°C

*Equivalent to 9.0 g of disodium hydrogen phosphate dodecahydrate.

## METHOD PRINCIPLE

Enzymatic digest of casein provides amino acids, nitrogen, carbon and minerals. Sodium chloride maintains the osmotic balance of the medium. Phosphates are the buffering agents.

## PREPARATION

Dehydrated medium: Suspend 20.0 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil shacking frequently until completely dissolved. Sterilize in autoclave at 121°C for 15 min.

## TEST PROCEDURE

Suspend the sample in Buffered Peptone Water to make dilutions as required.

For pre-enrichment, add sample to Buffered Peptone Water at a ratio of 1:10 or 1:9 depending on the method being used. Incubate at 37 ± 1°C for 16-20 hours before transfer to selective enrichment media.

## INTERPRETING RESULTS

Turbidity indicates microbial growth.

## APPEARANCE

Dehydrated medium: free-flowing, homogeneous, light beige.
Prepared medium: clear, light amber.

## STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store bottles and tubes at 10-25°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

## SHELF LIFE

Dehydrated medium: 4 years.
Prepared medium: 2 years.

## QUALITY CONTROL

The medium is inoculated with the microbial strains indicated in the QC tables, according to ISO 11133.
Inoculum for use as diluent: $10^3$-$10^4$ CFU.
Subcultured immediately on Tryptic Soy Agar and after 45-65 minutes at 20-25°C.
Incubation conditions: 35 ± 2°C for 18-24 hours.

**QC Table 1.**

| Microorganism | | Specification |
|---|---|---|
| *Escherichia coli* | WDCM 00012 | ± 30% colonies of original count |
| *Staphylococcus aureus* | WDCM 00034 | ± 30% colonies of original count |
| *Listeria monocytogenes* 4b | WDCM 00021 | ± 30% colonies of original count |

Inoculum for productivity: ≤ 100 CFU.
Incubation conditions: 37 ± 1°C for 16-20 hours.

**QC Table 2.**

| Microorganism | | Specification |
|---|---|---|
| *Salmonella typhimurium* | WDCM 00031 | Growth, good turbidity of the medium |
| *Salmonella enteritidis* | WDCM 00030 | Growth, good turbidity of the medium |
| *Escherichia coli* | WDCM 00012 | Growth, good turbidity of the medium |

## WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for *In vitro* diagnostic use and must be used only by properly trained operators.

## DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

## BIBLIOGRAPHY


1. ISO 11133:2014. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
2. ISO 11290-2/A1:2005 Food microbiology – Horizontal method for the detection and enumeration of *Listeria monocytogenes* – Part 2: Enumeration method.
3. ISO 21528-1:2004. Horizontal method for the detection and enumeration of *Enterobacteriaceae* – Part 1: MPN technique with pre-enrichment.
4. ISO 21528-2:2004. Horizontal method for the detection and enumeration of *Enterobacteriaceae* – Part 2: Colony count technique.
5. ISO 6579:2002. Microbiology of food and animal feeing stuffs – Horizontal method for the detection of *Salmonella* spp.
6. Rose (2001) Isolation and identification of Salmonella from meat, poultry and egg products. In Microbiology laboratory guidebook, 3rd ed., Food Safety and Inspection Service, U.S. Department of Agriculture, Washington, D.C.
7. ISO 6887-1:1999. Microbiology of food and animal feeing stuffs – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination. Part 1: General rules for the preparation of the initial suspension and decimal dilutions.
8. Sadovski (1977) J. Food Technol. 12:85.
9. Edel and Kampelmacher (1973) Bull. W.H.O. 48:167.


| PRESENTATION | | Contents | Ref. |
|---|---|---|---|
| Buffered Peptone Water | Tubes | 20 x 9 ml tubes | 24199 |
| Buffered Peptone Water | Tubes | 100 x 9 ml tubes | 26199 |
| Buffered Peptone Water | Tubes | 20 x 10 ml tubes | 24099 |
| Buffered Peptone Water | Bottles | 6 x 90 ml bottles | 414030 |
| Buffered Peptone Water | Bottles | 25 x 90 ml bottles | 454030 |
| Buffered Peptone Water | Bottles | 6 x 200 ml bottles | 412090 |
| Buffered Peptone Water | Bottles | 6 x 225 ml bottles | 414020 |
| Buffered Peptone Water | Bottles | 25 x 225 ml bottles | 451402 |
| Buffered Peptone Water | Dehydrated medium | 100 g of powder | 621014 |
| Buffered Peptone Water | Dehydrated medium | 500 g of powder | 611014 |
| Buffered Peptone Water | Dehydrated medium | 5 kg of powder | 6110145 |

## TABLE OF SYMBOLS

| | | | | | |
|---|---|---|---|---|---|
| LOT Batch code | IVD *In vitro* Diagnostic Medical Device | Manufacturer | Use by | Fragile, handle with care | Keep away from sunlight |
| REF Catalogue number | Temperature limitation | Contains sufficient for <n> tests | Caution, consult Instruction For Use | Do not reuse | |


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