

BUFFERED PEPTONE WATER

IVD in Class A, EU Reg. 2017/746

 For in vitro diagnostic use **IVD**

Buffered Peptone Water is used for pre-enriching damaged Salmonella species from food specimens to increase recovery. Since it is non-selective, it may also be used as a suspension fluid or enrichment medium for other bacteria.

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

DESCRIPTION AND PRINCIPLE

The food preservation techniques involving heat, desiccation, preservatives, high osmotic pressure or pH changes cause sublethal injury to salmonellae.

Preenrichment in a nonselective medium allows for repair of cell damage and facilitates the recovery of salmonellae. Buffered Peptone Water maintains a high pH over the pre-enrichment period and results in repair of injured cells that may be sensitive to low pH. This is particularly important for vegetable specimens which have a low buffering capacity. These media can be used for testing dry poultry feed.

Buffered Peptone Water is a standard methods medium.

The principle of the pre-enrichment method with Buffered Peptone Water includes transfer of the material (meat or other foods) into the medium after homogenization, followed by incubation; afterwards an aliquot is transferred into Tetrathionate Broth and other appropriate selective enrichment media. After their incubation, an aliquot is subcultured to Brilliant Green Agar Modified; the medium is incubated and inspected for the presence of Salmonella.

In addition, it may be used as a washing and rinsing fluid for materials suspected to contain Salmonella and other bacteria.

Buffered Peptone Water contains peptone as a source of carbon, nitrogen, vitamins and minerals. Sodium chloride maintains the osmotic balance. Phosphates buffer the medium.

COMPOSITION	g/L
Peptone	10.0 g
Sodium Chloride	5.0
Disodium Hydrogen Phosphate	3.5
Potassium Dihydrogen Phosphate	1.5

Final pH 7,0 ± 0,2 at 25°C

WARNING AND PRECAUTIONS

For in vitro diagnostic use.

Observe the precautions normally taken when handling laboratory reagents.

Dehydrated medium: HIGHLY HYGROSCOPIC. During the handling, wear dust protection mask. Avoid the eye contact. Do not use beyond the expiration date or if the product shows signs of deterioration, an altered color or has compacted.

Prepared Medium: The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous.

Safety Data Sheet is available on request for professional users.

All waste must be disposed of according to local directives.

STORAGE AND STABILITY

Dehydrated medium: 10-30°C

Prepared medium: 10-25°C

BUFFERED PEPTONE WATER is stable until the expiration date indicated on the label under the recommended storage conditions.

PREPARATION

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

Prepared medium (bottles): Ready to use.

PROCEDURE

Suspend the sample in BPW to make dilutions as required. For pre-enrichment, add sample to BPW 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.

RESULTS

Turbidity indicates microbial growth.

QUALITY CONTROL

Dehydrated medium: free-flowing, homogeneous, light beige.

Prepared medium: clear, light amber.

FUNCTION: Dilution – INCUBATION: 45 min-1h a 20-25°C (ISO 6887)

MICROORGANISMI	SPECIFICATION
Escherichia coli ATCC 25922	±30% colonies of original count
Escherichia coli ATCC 8739	±30% colonies of original count
Staphylococcus aureus ATCC 25923	±30% colonies of original count

FUNCTION: Dilution – INCUBATION: 1h ± 5 min a 20°C ± 2 (ISO 11290-2)

MICROORGANISMI	SPECIFICATION
Listeria monocytogenes 4b ATCC 13932	±30% colonies of original count
Listeria monocytogenes 1/2a ATCC 35152	±30% colonies of original count

FUNCTION: Productivity – INCUBATION: 18 or 2 ± 2 a 37°C ± 1 (ISO 6579-1)

MICROORGANISMI	SPECIFICATION
Salmonella Typhimurium ATCC 14028	Good growth/Turbidity of the medium
Salmonella Enteritidis ATCC 13076	Good growth/Turbidity of the medium

FUNCTION: Productivity – INCUBATION: 18 or 2 ± 2 a 37°C ± 1 (ISO 21528-1)

MICROORGANISMI	SPECIFICATION
Salmonella Typhimurium ATCC 14028	Good growth/Turbidity of the medium
Salmonella Enteritidis ATCC 13076	Good growth/Turbidity of the medium
Escherichia coli ATCC 25922	Good growth/Turbidity of the medium
Escherichia coli ATCC 8739	Good growth/Turbidity of the medium

REFERENCES

- EN ISO 11133:2014+Amd1:2018. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
- ISO 11290-2:2017. Microbiology of the food chain – Horizontal method for the detection and enumeration of Listeria monocytogenes and Listeria spp. – Part 2: Enumeration method.
- ISO 21528-1:2017. Microbiology of the food chain – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 1: Detection of Enterobacteriaceae.
- ISO 21528-2:2017. Microbiology of the food chain – Horizontal method for the detection and enumeration of Enterobacteriaceae – Part 2: Colony-count technique.
- ISO 6579-1:2017. Microbiology of the food chain – Horizontal method for the detection, enumeration and serotyping of Salmonella spp. – Part 1: Detection of Salmonella spp.
- 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.
- ISO 6887-1:2017. Microbiology of the food chain – 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.
- Sadovski (1977) J. Food Technol. 12:85.
- Edel and Kampelmacher (1973) Bull. W.H.O. 48:167
- UNI EN ISO 11133:2020
- ISO 6579-1:2020

PRESENTATION

Packaging
REF.

Dehydrated medium:

BUFFERED PEPTONE WATER

100 g (5 L)	11041
500 g (25L)	10041
5 Kg (250 L)	13041

Prepared medium:

BUFFERED PEPTONE WATER

6 x 90 mL bottles	64130
12 x 225 mL bottles	23448
20 x 9 mL Tubes	5027/20P
100 x 9 mL Tubes	5027/100P

SYMBOLS



Read the instructions



Biological hazard



CE Mark (product complies with the requirements of Regulation (EU) 746/2017)



Temperature limitation



Use by



For in vitro diagnostic use



Manufacturer