

PRODUCT INFORMATION

Product Type: Bottle product

Cat No. BP227 - BUFFERED PEPTONE WATER FOR SALMONELLA

Intended Use:

Recommended as a diluent for the homogenization of samples in the microbiological analysis and for the pre-enrichment of *Enterobacteriaceae* and *Salmonella*.

Principles and uses:

Buffered Peptone Water is a non-selective medium recommended as a pre-enrichment medium by the ISO 6579 and ISO 19250 normative for *Salmonella* detection in food and water respectively and by the ISO 21528 normative for *Enterobacteriaceae* detection.

A feature common to all selective media is that sub lethally injured organisms are not generally detected and therefore a recovery step must be included in examination procedures. This is of importance, particularly in the food industry as various processes such as heat, desiccation, preservation processes, pH changes, etc, cause sublethal injuries to *Salmonella*. The broth is rich in nutrients and produces high resuscitation rates for sub-lethally injured bacteria and intense growth.

Changes in pH may cause damages to bacteria growth. Buffered Peptone Water maintains a high pH over the enrichment period via the phosphate buffer system and allows repair of injured cells sensitive to low pH. Pancreatic digest of casein provides nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance.

Salmonella can be present in food and water in small numbers and are usually found with considerably larger numbers of other *Enterobacteriaceae* or other families. Pre-enrichment is necessary to allow the detection of small numbers of *Salmonella* or injured *Salmonella*.

Buffered Peptone Water is also recommended by the ISO 6887 as a diluent for all enumerations of microorganisms and by the ISO 11290 as a diluent for *Listeria monocytogenes* enumeration.

Regulations: ISO 11133 / ISO 11290 / ISO 19250 / ISO 21528 / ISO 6579 / ISO 6887

Instructions for use

- For pre-enrichment of *Salmonella* spp. in food, animal feed, animal faeces, and environmental samples according to ISO 6579: - Inoculate the Buffered Peptone Water with the sample or dilutions, and incubate at 34-38 °C for 18 h.
- For pre-enrichment of *Salmonella* spp. in water samples according to ISO 19250: - Inoculate the Buffered Peptone Water with the sample or dilutions, and incubate at 36±2 °C for 18±2 h.

Reference

M.R. Pascual Anderson (1982) Techniques for Microbiological Analysis of Foods and Drinks, CeNAN.

ISO 6579. Microbiology of food stuff for humans and animals. Horizontal method to detect *Salmonella* spp.

ISO 19250 Water Quality-Detection of *Salmonella* spp. ISO 6887 Microbiology of the food chain -- Preparation of test samples, initial suspension and decimal dilutions for microbiological examination.

Composition:

Enzymatic digest of casein 10 g/L
Potassium dihydrogen phosphate 1.5 g/L
Sodium chloride 5 g/L
Di-sodium hydrogen phosphate 3.5 g/L

Storage: 15°-25°C

Appearance: Light Amber

pH Range: 6.8 - 7.2

Exp. Date: Printed on label and on the item.

Required materials not supplied: Laboratory equipment as required.

Warning and Precautions:

Warning and Precautions - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Bottles if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Bottles may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.

Waste Disposal

After interpretation all items should be destroyed by standard incineration methods.

Performance Testing Results:

GPT: inoculum 10-100 cfu

TEST	ATCC	Incubation Temp. (°C)	Incubation Cond.	Reaction 1
<i>Salmonella typhimurium</i>	14028	33-37 °C	Aerobic, 18 hours	Growth
<i>Salmonella enteritidis</i>	13076	33-37 °C	Aerobic, 18 hours	Growth