



BUFFERED PEPTONE WATER (ISO 6579-1:2017 / 11133:2014) TM 307

INTENDED USE

For pre-enrichment of injured *Salmonella* species prior to selective enrichment and isolation.

COMPOSITION

Ingredients	Gm\Ltr.
Peptone	10.000
Sodium chloride	5.000
Sodium phosphate dibasic	3.500
Potassium phosphate monobasic	1.500

PRODUCT SUMMARY AND EXPLANATION

Buffered Peptone Water is a non-selective pre-enrichment medium for the isolation for the *Salmonella* species from food and associated samples. The medium is designed to be used prior to selective enrichment. As *Salmonella* may be present in low number or sub-lethally injured pre-enrichment allows cells time to repair and multiply before being introduced to selective culture, thereby improving the chances of recovery from sample.

The composition and performance criteria of this medium are as per the applications laid down in ISO 6579-2002, whereas the quality control of Buffered peptone water includes testing in accordance with ISO 6579:2017 and ISO 11133-2002.

PRINCIPLE

The media contains Peptone as a source of carbon, nitrogen, vitamins and minerals. Sodium chloride maintains the osmotic balance and phosphates buffer the medium. The broth is rich in nutrients and produces high resuscitation rates for sub lethally injured bacteria and supports intense growth. The phosphate buffer system prevents bacterial damage due to changes in the pH of the medium.

INSTRUCTION FOR USE

1. Dissolve 20.00gms in 1000ml distilled water.
2. Gently heat to boiling with gentle swirling and dissolve the medium completely.
3. Dispense 50 ml amount into each flask.
4. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
5. Cool at room temperature prior to use.



QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Cream to yellow colour, homogeneous mixture, free flowing powder

Appearance of prepared medium: Light yellow colour, clear solution without any precipitate

pH (at 25°C): 7.2 ± 0.2

CULTURAL RESPONSE

Cultural characteristics observed after inoculating (103CFU/ml), after incubation at $37 \pm 2^\circ\text{C}$ for 18 - 24 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Recovery* (%)
<i>Salmonella enteritidis</i>	13076	10^3	Luxuriant	$\geq 50\%$
<i>Salmonella typhi</i>	6539	10^3	Luxuriant	$\geq 50\%$
<i>Salmonella typhimurium</i>	14028	10^3	Luxuriant	$\geq 50\%$
<i>Escherichia coli</i>	25922	10^3	Fair - Good	30- 40%

*Recovery is observed on XLD Agar (TM 492)

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

REFERENCE

1. Angelotti, Academic Press, New York, N.Y. (1963).
2. Edel and Kampelmacher, Normative UNE-EN ISO 6579. Microbiology of food stuff for humans and animals. Horizontal method to detect *Salmonella* spp. Bull. W.H.O., 48:167. (1973).
3. M.R. Pascual Anderson. Techniques for Microbiological Analysis of Foods and Drinks, CeNAN. (1982).
4. Juven, Cox, Bailey, Thomson, Charles and Schutze, J. Food Prot., 47:299. (1984).
5. Sadovskii, J. Food Technol., 12:85. (1977)



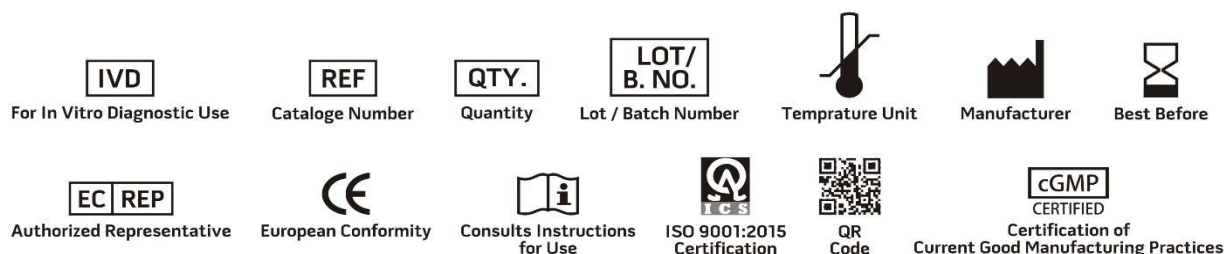
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PRODUCT DATA SHEET

6. International Organisation for Standardization (ISO), Draft ISO/ DIS. 6579. (1993).

7. ISO 6579-1:2017 Microbiology of the food chain -- Horizontal method for the detection, enumeration and serotyping of Salmonella -- Part 1: Detection of Salmonella spp.

8. ISO 11133:2014 Microbiology of food, animal feed and water - Preparation, production, storage and performance testing of culture media.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.