77187 Peptone Water, phosphate-buffered (Tryptone Phosphate Water; Buffered Peptone Water; BPW)

For the non-selective pre-enrichment of bacteria, in particular pathogenic members of the Enterobacteriaceae (sub-lethal damaged), from food and other material.

Composition:

Ingredients	Grams/Litre
Peptone	10.0
Sodium chloride	5.0
Disodium hydrogen phosphate (anhydrous)	3.5
Potassium dihydrogen phosphate	1.5
Final pH 7.2 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance: Faintly beige coloured, homogeneous, free flowing powder.
Colour and Clarity: Faintly brownish-yellow coloured, clear solution without any precipitate.

Directions:
Dissolve 20 g in 1 litre distilled water. Sterilize by autoclaving at 121°C for 15 minutes.

Inoculate 10 g sample in 50 mL of this medium and incubate at 35°C for 18 hours. Transfer 10 mL of the medium to 100 mL Tetrathionate Broth and incubate at 43°C for 24-48 hours and then subculture on selective plating media. Examine the plates for colonies of *Salmonella* species.

Principle and Interpretation:
Edel and Kampelmacher (1) noted that sublethal injury to *Salmonellae* may occur in many food preservation processes. Enriching injured cells in Lactose broth (pH 6.9) may be further detrimental to their recovery (2).
Peptone Water, phosphate-buffered is a pre-enrichment medium for the isolation of Enterobacteriaceae, specially *Salmonella* species, from food and other samples. The pre-enrichment gives the sub-lethal damaged cells time to repair and to proliferate (3). This step is needed if low numbers of bacteria are expected and to improve the recovery rate.

Cultural characteristics after 18-24 hours at 35°C

Organisms (ATCC)	Growth
Salmonella serotype Enteritidis (13076)	+++
Salmonella serotype Typhi (19430)	+++
Salmonella serotype Typhimurium (14028)	+++

References:
1. W. Edel, E.H. Kampelmacher, Bull. Wld. Hlth. Org., 48, 167 (1973)
2. R. Angelotti, "Microbiological Quality of Foods", Academic Press, New York (1963)
3. A.Y. Sadovski, J. Fd. Technol., 12, 85 (1977)
4. International Organization for Standardization (ISO), Draft ISO/DIS 6579 (1993)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.