



Dehydrated Culture Media  
Bases / Media Supplements

## Technical Information

### Buffered Peptone Water

#### Product Code: DM 1614S

**Application:** - Buffered Peptone Water is recommended for pre-enrichment of injured *Salmonella* species from foods prior to selective enrichment and isolation. It is recommended by BIS committee under the specifications IS: 5887(Part III)-1999.

#### Composition\*\*

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Sodium chloride	5.000
Disodium phosphate.12H <sub>2</sub> O	9.000
Monopotassium phosphate	1.500
Final pH ( at 25°C)	7.0±0.2

\*\*Formula adjusted, standardized to suit performance parameters

#### Principle & Interpretation

Edel and Kampelmacher (1) noted that sublethal injury to *Salmonellae* may occur in many food preservation processes. Enriching injured cells in Lactose broth (DM2003S) (pH 6.9) may be further detrimental to their recovery (2). Pre-enrichment in Buffered Peptone Water at 35°C for 18-24 hours results in repair of injured cells (3). Recently ISO committee has also recommended this pre-enrichment medium for the detection of *Enterobacteriaceae* (4). Present formulation is recommended by BIS as a non-selective pre-enrichment medium as well as a diluent for detection of *Salmonella* (5).

Inoculate the test sample in Buffered peptone water and incubate at 35 - 37°C for 16 - 20 hours. Transfer the culture to selective enrichment media, Modified Rappaport Vassiliadis Medium (DM 2137I) and Fluid Selenite Cystine Broth (DM 1025I). Incubate DM 2137I at 42°C and DM1025I at 35 - 37°C for 24 hours. Subculture on selective plating media. Examine the plates for colonies of *Salmonella* species.

#### Methodology

Suspend 25.5 grams of dehydrated powder media in 1000 ml distilled water. Dispense in 50 ml amounts. Sterilize by autoclaving at 15 lbs pressure (121°C) for 20 minutes.

#### Quality Control

##### Appearance

Cream to yellow coloured homogeneous free flowing powder.

##### Colour and Clarity

Light yellow coloured clear solution without any precipitate.

##### Reaction

Reaction of 2.0% w/v aqueous solution at 25°C. pH : 7.0±0.2

##### pH Range

6.80-7.20

##### Cultural Response

DM 1614S: Cultural characteristics observed after an incubation at 35-37°C for 18 - 24 hours.





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Organism	Inoculum (CFU)	Growth
<i>Salmonella Typhimurium ATCC 14028</i>	50-100	luxuriant
<i>Salmonella Typhi ATCC 19430</i>	50-100	luxuriant
<i>Salmonella Enteritidis ATCC 13076</i>	50-100	luxuriant

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.

## Further Reading

1. Edel W. and Kampelmacher E.H., 1973, Bull. Wld. Hlth. Org., 48:167.
2. Angelotti R., 1963, "Microbiological Quality of Foods", Academic Press, New York.
3. Sadowski A.Y., 1977, J. Fd. Technol., 12:85.
4. International Organization for Standardization (ISO), 1993, Draft ISO/DIS, 6579.
5. Bureau of Indian Standards, IS : 5887 (Part 3) 1999.

## Disclaimer :

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