HIMEDIA

Technical Data

# Phosphate Buffered Saline (For *Listeria*)

**M2097I**

## Intended use

Phosphate Buffered Saline is used for preparation of dilutions for *Listeria* species for further testing from food samples. The composition and performance criteria of this medium are as per specifications laid down in ISO 11290-1:2017 and ISO 11290-2:2017

## Composition**

**ISO 11290-1:2017 and ISO 11290-2:2017 Specification- Phosphate Buffered Saline (For *Listeria*)**

| Ingredients | g/ L |
|---|---|
| Sodium chloride | 8.500 |
| Disodium hydrogen phosphate dihydrate | 8.980 |
| Sodium dihydrogen phosphate | 2.710 |
| Final pH ( at 25°C) | 7.2±0.2 |

**M2097I- Phosphate Buffered Saline (For *Listeria*)**

| Ingredients | g/ L |
|---|---|
| Sodium chloride | 8.500 |
| Disodium hydrogen phosphate, $2H_2O$ | 8.980 |
| Sodium dihydrogen phosphate | 2.710 |
| Final pH ( at 25°C) | 7.2±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Directions

Suspend 18.37 grams ((the equivalent weight of dehydrated medium per llitre)) in 1000 ml purified / distilled water. Dispense into tubes or flasks as desired. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C)) for 15 minutes.

## Principle And Interpretation

Phosphate Buffered Saline is used for preparing dilutions, blanks for the examination of food. This solution gives a pH of 7.2 and also provides sodium and phosphate ions. The composition is as per ISO (3,4).

## Type of specimen

Food and animal feeds, environmental samples in the area of food production and food handling.

## Specimen Collection and Handling:

For samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4).
After use, contaminated materials must be sterilized by autoclaving before discarding.

## Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

## Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

**Appearance**

White to cream homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Colourless clear solution without any precipitate

**Reaction**

Reaction of 1.84% w/v aqueous solution at 25°C. pH : 7.2±0.2

**pH**

7.00-7.40

**Cultural response**

Recovery of ±30% of the original count (recovered on Tryptone Soya Agar , M290), when the inoculated sample holding time is 45 minutes to 1 hour at 20-25°C. The plates are incubated at 37 ± 2°C for 18 ± 2 hours.

| Organism | Inoculum (CFU) | Observed Lot value (CFU) | Recovery |
|---|---|---|---|
| *Listeria monocytogenes ATCC* 35152 (00109*) | 50-100 | 15-130 | ±30% |
| *Listeria monocytogenes ATCC 19112* | 50-100 | 15-130 | ±30% |
| *Listeria monocytogenes* ATCC 13932 (00021*) | 50-100 | 15-130 | ±30% |
| *Listeria monocytogenes ATCC 19111 (00020*)* | 50-100 | 15-130 | ±30% |
| *Listeria ivanovii ATCC 19119* | 50-100 | 15-130 | ±30% |
| *Listeria innocua ATCC* 33090 (00017*) | 50-100 | 15-130 | ±30% |
| *Listeria seeligeri ATCC 35967* | 50-100 | 15-130 | ±30% |
| *Listeria welshimeri ATCC 43549* | 50-100 | 15-130 | ±30% |
| *Listeria grayi ATCC 19120* | 50-100 | 15-130 | ±30% |

Key : (*) - Corresponding WDCM numbers

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label. Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

## Reference

1. Microbiology of Food chain-Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp. Detection method . ISO 11290-1:2017
2. Microbiology of Food chain-Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp. Enumeration method ISO 11290-2:2017
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
4. Jorgensen, J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W.(2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 01/ 2024