

Buffered Peptone Water (BPW) (ISO)

**SKU: 700003004, 700003005, 700003006, 700003007, 700004382
NCM0015**

400000743 (NCM0015) 500G, 5KG & 10KG DCM Packs
NCM3202 20L Ready-to-Reconstitute Media Bags

Intended Use

Buffered Peptone Water (BPW) (ISO) is used for the non-selective pre-enrichment of a variety of microorganisms from food including *Salmonella* spp. and *Cronobacter* spp. from food. Buffered Peptone Water (BPW) (ISO) is not intended for use in the diagnosis of disease or other conditions in humans.

Description

Formulated to ISO 6579-1:2017, ISO 22694:2017, ISO 21528-1:2017 and ISO 12950:2010. This pre-enrichment medium is designed to help sub-lethally damaged salmonellae recover before introducing them into a selective medium. This nutrient medium is free from inhibitors and is well buffered to maintain pH 7.0 for the incubation period. Sublethal injury to salmonellae occurs in many food processes and this pre-enrichment step greatly increases recovery of these organisms.

Typical Formulation

| | |
|---|----------|
| Enzymatic Digest of Casein | 10.0 g/L |
| Sodium Chloride | 5.0 g/L |
| Disodium Hydrogen Phosphate (anhydrous) | 3.6 g/L |
| Potassium Dihydrogen Phosphate | 1.5 g/L |
| Final pH: 7.0 ± 0.2 at 25°C | |

Formula is adjusted and/or supplemented as required to meet performance specifications.

Precaution

Refer to SDS

Dehydrated Culture Medium Preparation

1. Dissolve 20.1 grams of the medium in one liter of purified water.
2. Mix thoroughly.
3. Autoclave at 121°C for 15 minutes.

Ready-to-Reconstitute Media Bag Preparation

Please refer to the Instructions for Use for the range.

Test Procedure

- For detection of *Salmonella* spp. (Water Quality) - Refer to ISO 19250:2010
- For detection and enumeration of Enterobacteriaceae - Refer to ISO 21528-1:2017
- For detection and enumeration and Serotyping of *Salmonella* - Refer to ISO 6579-1:2017
- For detection *Cronobacter* spp. - Refer to ISO 22964:2017
- For detection of STEC - Refer to ISO/TS 13136:2012

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing and beige.

Prepared Appearance: Prepared medium is clear with no precipitate and pale yellow.



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Expected Cultural Response: Cultural response in Buffered Peptone Water (BPW) (ISO), incubated aerobically at $37 \pm 1^\circ\text{C}$ and examined for growth after 16 - 20 hours incubation.

| <u>MICROORGANISM</u> | <u>ATCC</u> | <u>APPROX. INOCULUM (CFU)</u> | <u>EXPECTED RESULTS</u> |
|--|-------------|-------------------------------|--|
| Pre-enrichment for <i>Salmonella</i> and <i>Enterobacteriaceae</i> detection | | | |
| <i>Escherichia coli</i> | 25922 | 10-100 | Growth |
| <i>Escherichia coli</i> | 8739 | 10-100 | Growth |
| <i>Salmonella enteritidis</i> | 13076 | 10-100 | Growth |
| <i>Salmonella typhimurium</i> | 14028 | 10-100 | Growth |
| <i>Cronobacter sakazakii</i> | 29544 | 10-100 | Growth |
| <i>Cronobacter muytjensii</i> | 51329 | 10-100 | Growth |
| Diluent for enumeration of microorganisms and <i>L. monocytogenes</i> | | | |
| <i>Escherichia coli</i> | 25922 | $>10^4$ | T ₁ plate counts w/in $\pm 30\%$ of counts for T ₀ |
| <i>Escherichia coli</i> | 8739 | $>10^4$ | T ₁ plate counts w/in $\pm 30\%$ of counts for T ₀ |
| <i>Staphylococcus aureus</i> | 25923 | $>10^4$ | T ₁ plate counts w/in $\pm 30\%$ of counts for T ₀ |
| <i>Listeria monocytogenes</i> | 13932 | $>10^4$ | T ₁ plate counts w/in $\pm 30\%$ of counts for T ₀ |
| <i>Listeria monocytogenes</i> | 35125 | $>10^4$ | T ₁ plate counts w/in $\pm 30\%$ of counts for T ₀ |

The organisms listed are the minimum that should be used for quality control testing.

Results

Growth is indicated by turbidity.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitation of the Procedure

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Storage

Store dehydrated culture media (NCM0015 or 400000743) at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

Store ready-to-reconstitute media bags (NCM3202) at 10-25°C away from direct sunlight. Once reconstituted store at 10-25°C away from direct sunlight for up to 5 days (providing asepsis is maintained).



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References

1. ISO 19250:2010 Water quality -- Detection of *Salmonella* spp.
2. ISO 21528-1:2017 Microbiology of the food chain -- Horizontal method for the detection and enumeration of Enterobacteriaceae -- Part 1: Detection of Enterobacteriaceae
3. ISO 6579-1:2017 Microbiology of the food chain – Horizontal method for the detection, enumeration and serotyping of *Salmonella*
4. ISO 22964:2017 Microbiology of the food chain -- Horizontal method for the detection of *Cronobacter* spp.
5. ISO/TS 13136:2012 Microbiology of food and animal feed – Real-time polymerase chain reaction (PCR)-based method for the detection of food-borne pathogens – Horizontal method for the detection of Shiga toxin-producing *Escherichia coli* (STEC) and the determination of O157, O111, O26, O103 and O145 serogroups

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