BacterLab Division

Issue date: 02/01/2025
Version: 01.2025

DRY-BAG MEDIUM

BacterBag™ Dry Buffered Peptone Water (BPW)

High-quality dry medium, packaged in a transparent, lightweight, and convenient plastic bag, specifically designed to optimize the BPW medium preparation process for the pre-enrichment step

Code: 10013

1. INTENDED USE

BacterBag™ Dry Buffered Peptone Water is a high-quality dry medium, packaged in a transparent, lightweight, and convenient plastic bag, specifically designed to optimize the preparation process for large quantities of BPW medium. This product simplifies the preparation steps in microbiological testing.

Each **BacterBag™ Dry Buffered Peptone Water** bag, when supplemented with sterile distilled water, produces 20L of complete medium, ready to use without complex preparation. This medium supports the non-selective enrichment of Salmonella species, providing conditions for bacterial cells to recover and multiply before being transferred to selective culture media. This process helps improve the detection and recovery of Salmonella from test samples, enhancing accuracy and efficiency in microbiological studies.

Key Features:

- **Convenient:** Just add purified water, and the medium is ready to use within minutes.
- **Cost-effective:** Lightweight and easy to transport, no need for weighing or sterilizing, reducing the workload of the medium preparation department.
- **Safe:** No need to handle glassware or measure medium; used bags can be disposed of with regular waste.
- **Quality assurance**: Each batch is quality-certified, reducing the need for quality control checks.

2. PRINCIPLES

BacterBag™ Dry Buffered Peptone Water contains key components such as peptone, sodium chloride (NaCl), and phosphate buffer. Peptone provides the nitrogen and amino acids required for bacterial growth. Sodium chloride helps maintain osmotic pressure, creating favorable conditions for bacteria. The phosphate buffer stabilizes the pH, ensuring the environment is suitable for bacterial recovery and growth before transitioning to selective media.

3. TYPICAL COMPOSITION

There are two types of **BacterBag™ Dry Buffered Peptone Water** available for customers to choose from, depending on their specific needs:

For 1 liter of medium

Peptone	10,0 g
Sodium Choloride	5,0 g
Disodium phosphate, anhydrous	3,57 g
Monopotassium phosphate, anhydrous	1,5 g

Or

Peptone	10,0 g
Sodium chloride	5,0 g
Disodium phosphate, dodecahydrated	9,0 g
Monopotassium phosphate, anhydrous	1,5 g

pH of the ready-to-use medium at 25°C: 7,0 ± 0,2

4. PREPARATION

- Open the BacterBag™ Dry Buffered Peptone Water bag and add 20L of sterile distilled water into the bag.
- Note: For dry medium, there is no need to remeasure the components as they are pre-measured in each bag.
- Stir thoroughly to dissolve the medium in the water. Once mixed, the medium is ready to use without the need for additional sterilization

5. INSTRUCTIONS FOR USE

5.1. Direct Culturing from the Original Sample

- Take 10 or 25 g of the sample to be analyzed and add it to a volumetric flask. Then, add 90 or 225 mL of the BacterBag™ Dry Buffered Peptone Water that has been dissolved in water.
- Mix thoroughly using an appropriate homogenizer.
- For enriching bacteria such as Salmonella or Enterobacteria, the sample should be incubated following the appropriate analytical procedure to ensure accurate results.

5.2. Preparing Serial Dilution Solutions

- Take 1 mL of the stock suspension and add it to a test tube containing 9 mL of the BacterBag™ Dry Buffered Peptone Water that has been dissolved in water.
- Mix the solution thoroughly.
- Continue diluting as required by repeating the steps above to achieve the desired dilution

6. RESULTS

- This medium is used to recover and enrich bacteria in samples. After incubation, secondary culturing should be performed in other selective media to identify the bacteria.

7. QUALITY CONTROL

BacterLab ensures the quality of each product batch by testing with ATCC reference strains.

Reference strains	Incubation conditions	Expected results
S. Typhimurium ATCC 14028	35 – 37°C for 18 – 24 hours	Good growth
E. coli ATCC 35218		Good growth

S. aureus ATCC 25923		Good growth

8. STORAGE AND TRANSPORT CONDITIONS

- Storage: 8 – 25°C.
- Transportation: Ambient temperature.

9. PACKAGING

- Packaging: Equivalent to 20L of medium per bag or as per customer requirements.

10. SHELF LIFE

- Expiration Date: 36 months from the manufacturing date.

11. BIBLIOGRAPHY

- Solabia. (n.d.). *Buffered Peptone Water* [Technical data sheet]. Biokar Diagnostics. Retrieved April 14, 2025, from https://www.solabia.com/biokar-diagnostics/product/buffered-peptone-water/?documentation=4808&_wpnonce=065ae35223