

## Buffered Peptone Water, Prepared – Instructions for Use

### *Intended Use*

BACGro™ Buffered Peptone Water (BPW), prepared media is intended for use as a non-selective pre-enrichment for *Salmonella* species from a wide variety of food matrices. Buffered Peptone Water is not intended for use in diagnosis, treatment, or prevention of disease in humans. BACGro™ BPW conforms ISO 11133 requirements<sup>1</sup>.

### *Product Summary*

Various food processing steps may lead to sub-lethal injury of *Salmonella*, which subsequently may not be recovered by direct detection methods. Buffered Peptone Water allows for recovery and growth of these organisms prior to detection. The absence of selective agents reduces stress on the cells. Unlike other pre-enrichment formulations such as Lactose Broth, BPW contains phosphate salts that provide buffering capacity to maintain the pH of the enrichment. The peptone in BPW provides a carbon and nitrogen source, and sodium chloride maintains osmotic balance.

BPW is the recommended pre-enrichment medium for many food matrices in the FDA's Bacteriological Analysis Manual (BAM)<sup>2</sup> and the USDA's Microbiology Laboratory Guidebook (MLG)<sup>3</sup>.

### *Formulation\* (per Liter)*

|                         |                 |
|-------------------------|-----------------|
| Peptone                 | 10.0 g          |
| Sodium Chloride         | 5.0 g           |
| Disodium Phosphate      | 3.5 g           |
| Monopotassium Phosphate | 1.5 g           |
| <b>Total</b>            | <b>20.0 g/L</b> |

\*Formula may be supplemented and/or adjusted as required to meet performance criteria

### *Directions*

For use in laboratory testing. Aseptically inoculate the medium with the desired specimen and incubate at the directed temperature and time duration required for growth promotion.

## Precautions

This product is for laboratory use only and should only be used by qualified, trained laboratory personnel. Personnel should always use proper aseptic technique and observe all biohazardous precautions. All microbiological cultures should be presumed to be infectious.

Avoid using this product if it shows evidence of microbial contamination, discoloration, or other signs of deterioration.

Avoid ingestion, inhalation, or contact with skin and mucous membranes. If contact occurs, flush the area with clean water.

## Quality Control Specifications

Gold Standard Diagnostics tests each lot of manufactured BACGro™ culture media utilizing appropriate control organisms and specifications as documented on the Certificate of Analysis. End users should perform quality control testing in accordance with government regulatory requirements and accreditation guidelines. For optimal growth of strict aerobes, containers should be vented during the incubation. This may be achieved by loosening the caps. The following specifications are routinely used for testing:

Appearance (prepared): Clear, pale yellow to amber, with no precipitate or debris

pH (prepared): 7.0 – 7.4 at 25°C

Organism Performance:

| Strain ID  | Inoculum | Incubation  |       |             | Result |
|--|----------|-------------|-------|-------------|--------|
|  |          | Time        | Temp. | Environment |        |
| <i>S. enterica</i> ser. Enteritidis<br>(ATCC® 13076) | <100 CFU | 16 – 20 hr. | 37° C | Aerobic     | Growth |
| <i>S. enterica</i> ser. Typhimurium<br>(ATCC® 14028) | <100 CFU | 16 – 20 hr. | 37° C | Aerobic     | Growth |
| <i>Escherichia coli</i><br>(ATCC® 25922)             | <100 CFU | 16 – 20 hr. | 37° C | Aerobic     | Growth |

## Limitations of the Procedure

This product is not labeled for use as a medical device, and is not intended to diagnose, treat, or prevent disease.

Due to variation in nutritional requirements, some strains may be encountered that grow poorly in this medium. Competing flora in the test sample may outgrow *Salmonella* and affect recovery.

Further testing is required for the identification and confirmation of *Salmonella*.

## ***Storage and Expiration***

BACGro™ Buffered Peptone Water should be stored at 2 – 25°C.

The expiration date printed on the label is applicable to media stored as directed.

## ***Catalog Numbers***

PLM1040 – Buffered Peptone Water, 400mL Bottle

<sup>1</sup> ISO 11133:2014, *Microbiology of food, animal feed and water – Preparation, production, storage, and performance testing of culture media.*

<https://www.iso.org/obp/ui/#iso:std:iso:11133:ed-1:v2:en>

<sup>2</sup> US Food and Drug Administration. *Microbiological Methods and Bacterial Analytical Manual (BAM).*

<https://www.fda.gov/food/laboratory-methods-food/microbiological-methods-bacteriological-analytical-manual-bam>

<sup>3</sup> US Department of Agriculture, Food Safety and Inspection Service. *Microbiology Laboratory Guidebook.*

<https://www.fsis.usda.gov/wps/portal/fsis/topics/science/laboratories-and-procedures/guidebooks-and-methods/microbiology-laboratory-guidebook/microbiology-laboratory-guidebook>

Revision History:

| Revision | Description       | Effective Date |
|----------|-------------------|----------------|
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