BACGro™ Culture Media

GOLD STANDARD DIAGNOSTICS

Buffered Peptone Water - Instructions for Use

Intended Use

BAC*Gro*™ Buffered Peptone Water (BPW), when prepared as directed, 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.

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)[1] and the USDA's Microbiology Laboratory Guidebook (MLG)[2].

Formulation (per Liter)*

Peptone	10.0 g
Sodium Chloride	5.0 g
Disodium Phosphate	3.5 g
Monopotassium Phosphate	1.5 g
Total	20.0 g/L

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

Directions

1. Add 20 g of BPW powder to 1L of deionized water.
2. Stir to dissolve completely.
3. Autoclave at 121 degrees Celsius for 15 minutes.
4. Cool prior to use.

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 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 BAC*Gro*™ 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. The following specifications are routinely used for testing:

Appearance (dehydrated): Light beige, homogenous, free flowing powder, free of debris

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	
S. enterica ser. Typhimurium (ATCC® 14028)	<100 CFU	16-20 hr.	37° C	Aerobic	Growth
S. enterica ser. Enteritidis (ATCC® 13076)	<100 CFU	16-20 hr.	37° C	Aerobic	Growth
Escherichia coli (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

BAC*Gro*™ Buffered Peptone Water should be stored at 2 – 30 degrees Celsius. Because of the hygroscopic nature of dehydrated culture media, it should be stored in a dry place and the lid should remain tightly sealed. Media should be discarded if it is not free flowing or shows discoloration.

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

Catalog Numbers

DCM1001- Buffered Peptone Water, 500g
DCM1005- Buffered Peptone Water, 5kg
DCM1010- Buffered Peptone Water, 10kg

[1] 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

[2] 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
04	Updating verbiage of chemical components in formulation.	17-AUG-2023
03	Periodic Review. No changes required.	07-MAR-2023
02	Added new part number DCM1001	17-JAN-2020
01	Document creation	13-AUG-2019