REF 42 042 / 42 043 / 42 111/ 42 629 / 42 729

08441 **E** - en - 2007/09

Buffered Peptone Water (BPW)

For microbiological control only

Diluent and pre-enrichment medium for the detection of *Salmonella*.

SUMMARY AND EXPLANATION

Buffered Peptone Water is used as:

- a non-selective pre-enrichment medium for the detection of *Salmonella* in food products and environmental specimens. It complies with the standard EN ISO 6579 (1) and Amendment A1 (Annex D). (8)
- a diluent for the enumeration of micro-organisms. It complies with the standards EN ISO 6887 (2, 3, 4, 5) and 8261. (6)
- a diluent for the enumeration of *Listeria monocytogenes*. It complies with the standard EN ISO 11290 – 2. (7)

PRINCIPLE

Buffered Peptone Water contains a mixture of peptones which encourage optimal growth of the species sought in food microbiology, and in particular *Salmonella*. The pH is maintained at 7.0 by the presence of a phosphate buffer.

CONTENT OF THE KIT

	Ready-to-use medium
Bottles:	
REF 42 042	6 x 90 ml bottles
REF 42 043	6 x 225 ml bottles
	BPW-F
Tubes:	
REF 42 111	100 x 9 ml tubes
	BPW-T
Bags / Minibags:	
REF 42 629	Pack of 3 x 3-liter bags (BAGS)
	BPW-3P
REF 42 729	Pack of 10 x 225 ml minibags (MINIBAGS)
	BPW-MNB

COMPOSITION

Theoretical formula.

This medium can be adjusted and/or supplemented according to the performance criteria required:

Casein and gelatin peptone (bovine or porcine)	10 g
Sodium chloride	5 g
Disodium hydrogen phosphate (12 H_2O)	9 g
Potassium dihydrogen phosphate	1.5 g
Purified water	1 l

pH 7.0

REAGENTS AND MATERIAL REQUIRED BUT NOT PROVIDED

Reagents

- **For the detection of *Salmonella*:**

- Selective enrichment broths for example: Muller-Kauffmann Tetrathionate broth with novobiocin (MKTTn) (Ref. 42 114), Rappaport Vassiliadis Soy (RVS) (Ref. 42 110), Rappaport Vassiliadis (RV) (Ref. 42 073), Selenite Cystine (SC) (Ref. 42 052) and MSRV medium (Ref. 42 639).
- Isolation media: XLD (Ref. 43 563/43 564), chromID™ Salmonella (Ref. 43 621/43 629), Hektoen (Ref. 43 111), Modified Brillant Green (Ref. 43 588) and XLT4 (Ref. 43 701) agars.

- **For the enumeration of *Listeria monocytogenes***

- chromID™ Ottaviani Agosti agar (Réf. 43 641).

Material

- Bacteriology incubator.
- Blender bag.

WARNINGS AND PRECAUTIONS

- **For microbiological control only.**
- **For professional use only.**
- All specimens, microbial cultures and inoculated products should be considered infectious and handled appropriately. Aseptic technique and usual precautions for handling the bacterial group studied should be observed throughout this procedure. Refer to "CLSI® M29-A, Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline – Current Revision". For additional information on handling precautions, refer to "Biosafety in Microbiological and Biomedical Laboratories – CDC/NIH – Latest edition", or the current regulations in the country of use.
- Culture media should not be used as manufacturing material or components.
- Do not use reagents after the expiry date.
- Do not use broths which show signs of contamination.
- Before use, make sure the tamper-proof systems are intact (capsule, seal, stopper).
- For the 3-liter bags, only pierce the rubber stopper once.
- The medium should be used according to the procedure indicated in this package insert. Any change or modification in the procedure may affect the results.

STORAGE CONDITIONS

- **Store the Buffered Peptone Water in its box at 2-25°C until the expiry date.**
- **Any opened 3-liter bags must be discarded at the end of the day.**

SPECIMENS

Follow the recommendations in the current standards to perform specimen collection and preparation.

INSTRUCTIONS FOR USE

Refer to the standard corresponding to the intended use.

For the detection of *Salmonella* in foods, refer, for example, to the method described in the standard EN ISO 6579 (1).

Allow the Buffered Peptone Broths to come to room temperature.

- **For 3-liter bags**

1. Homogenize the bag.
2. Remove the tamper-proof seal.
3. Delicately perforate the rubber stopper using a trocar in order to pour the broth.
4. Identify the samples using the removable labels on the bag.

- **For MINIBAGS**

MINIBAGS can be used:
- either by transferring the broth into a blender bag containing the test sample,
- or by directly inoculating a liquid sample.
  In this case, put the stopper back in place and incubate the MINIBAG.

Non-selective pre-enrichment of *Salmonella*:

A primary 1/10 dilution of the sample is generally performed (aseptically add 25 g (or 25 ml)) directly in the bottle (ref. 42 043), the MINIBAG (ref. 42 729) or a blender bag.
After mixing, incubate at 37°C ± 1°C for 18 ± 2 hours.

Perform selective enrichment in RVS, MKTTn or MRSV broth. Refer to the corresponding reagent package inserts.

Notes:
- If pre-enrichment is performed in a blender bag, it is preferable to use the 6x225 ml bottles (ref. 42 043), the bag (ref. 42 629), or the MINIBAG (ref. 42 729). For enumeration, the liquid samples can be directly inoculated in the bottles or the mini-bags .

READING AND INTERPRETATION

- After incubation of the selective enrichment broths, isolate on the two selective media chosen.
- Follow the procedure described in the standard and indicated in the package inserts of the selected isolation media.

QUALITY CONTROL

Buffered Peptone Water is designed and developed to meet the strictest quality requirements.
The results of the strains tested in the batch by batch quality control are given on the quality control certificate available on request.

LIMITATIONS OF THE METHOD

- Given the wide variety of specimens studied, it is the responsibility of the user to validate this medium for its specific intended use.
- Growth depends on the requirements of each individual micro-organism. It is therefore possible that certain strains which have specific requirements may not develop.

WASTE DISPOSAL

Dispose of used or unused reagents as well as any other contaminated disposable material following procedures for infectious or potentially infectious products.
It is the responsibility of each laboratory to handle waste and effluents produced according to their nature and degree of hazardousness and to treat and dispose of them (or have them treated and disposed of) in accordance with any applicable regulations.

LITERATURE REFERENCES

1. NF EN ISO 6579 : 2002. Horizontal method for the detection of *Salmonella spp*.
2. NF EN ISO 6887-1 : 1999. Preparation of test samples, initial suspension and decimal dilutions for microbiological examination. Part 1: General rules for the preparation of the initial suspension and decimal dilutions.
3. NF EN ISO 6887-2 : 2004
   Preparation of test samples, initial suspension and decimal dilutions for microbiological examination.
   Part 2: Specific rules for the preparation of meat and meat products.
4. EN ISO 6887-3 : 2004
   Preparation of test samples, initial suspension and decimal dilutions for microbiological examination.
   Part 3: Specific rules for the preparation of fish and fishery products.
5. EN ISO 6887-4 : 2004
   Preparation of test samples, initial suspension and decimal dilutions for microbiological examination.
   Part 4: Specific rules for the preparation of products other than milk and milk products, meat and meat products, and fish and fishery products.
6. EN ISO 8261 : 2001
   Milk and milk products. General guidance for the preparation of test samples, initial suspensions and decimal dilutions for microbiological examination.
7. EN ISO 11290-2 : 1998
   Microbiology of food and animal feeding stuffs. Horizontal method for the detection and enumeration of *Listeria monocytogenes* Part 2: Enumeration method.
   EN ISO 11290-2 / A1 : 2005 .Amendment 1
8. EN ISO 6579 / A1 : 2007
   Annex D : Detection of *Salmonella spp* in animal faeces and in environmental samples from the primary production stage.

TABLE DES SYMBOLES

Symbol	Meaning
	GB : Catalogue number US : Catalog number
	Manufacturer
	Temperature limitation
	Use by
	Batch code
	Consult Instructions for Use
	Contains sufficient for <n> tests

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Printed in France