

BUFFERED PEPTONE WATER

DILUENT
ENRICHMENT BROTH

1 INTENDED USE

Buffered Peptone Water is a general use diluent destined for numerous operations and standards including sample preparation, the preparation of stock suspensions and serial dilutions of samples (standard ISO 6887). This media is also used for the pre-enrichment of *Salmonella* and for *Cronobacter sakazakii*, by allowing the resuscitation of microorganisms having undergone sublethal treatments as in the case of spray drying, pasteurization, action of conservators, elevated osmotic pressure and high acidity (NF EN ISO 6579-1, ISO 22964...).

2 PRINCIPLES

Sodium chloride maintains the osmotic balance.

The medium is buffered with sodium and potassium phosphates.

3 TYPICAL COMPOSITION

The composition can be adjusted in order to obtain optimal performance.

For 1 liter of media:

- Peptone 10.00 g
- Sodium chloride 5.00 g
- Disodium phosphate, anhydrous 3.57 g
- Monopotassium phosphate, anhydrous . 1.50 g

pH of the ready-to-use media at 25 °C: 7.0 ± 0.2.

For 25.5 g of media BK018

- Peptone 10.0 g
- Sodium chloride 5.0 g
- Disodium phosphate, **dodecahydrated** 9.0 g
- Monopotassium phosphate, **anhydrous** 1.5 g

For 20 g of media BK131

- Peptone 10.0 g
- Sodium chloride 5.0 g
- Disodium phosphate, **anhydrous** 3.57 g
- Monopotassium phosphate, **anhydrous** 1.5 g

4 PREPARATION

- Dissolve 25.5 g of dehydrated medium BK018 or 20.0 g BK131 in 1 liter of distilled or demineralized water.
- Stir slowly until complete dissolution.
- Dispense in vials or tubes.
- Sterilize in an autoclave at 121°C for 15 minutes.
- Cool to room temperature.

✓ **Reconstitution:**
- BK018: 25.5 g/L
- BK131: 20.0 g/L

✓ **Sterilization:**
15 min at 121 °C

NOTE: For the double strength buffered peptone water dissolve 51.0 g of dehydrated medium BK018 or 40.0 g of dehydrated medium BK131 in 1 liter of distilled or demineralized water.

5 INSTRUCTIONS FOR USE

Preparation of stock solutions:

- Aseptically add 10 or 25 g of the product to analyze to a tared flask containing 90 or 225 mL of media prepared as above (or to the ready-to-use media BM057 or BM010).
- Homogenize thoroughly with an appropriate mixer in order to obtain a stock suspension or a pre-enrichment broth.
- For *Salmonella* or enterobacteria enrichment notably, incubate by carefully respecting the appropriate analytical protocol being followed.

Preparation of serial dilutions:

- Introduce 1 mL of the stock suspension into a tube containing 9 mL of media prepared as described or using ready-to-use media (BM056).
- Mix well.
- Redo the operation as many times as needed to achieve the proper dilution.

NOTE: For the analyze of acidic products (pH between 4.5 and 3.5), the double-strength buffered peptone water may be used (ISO 6887).

6 QUALITY CONTROL

Dehydrated media: cream-white powder, free-flowing and homogeneous.

Prepared media: amber solution, limpid, can have a slight precipitate after prolonged storage.

Typical culture response (NF EN ISO 11133):

Microorganisms		Growth
(1) <i>Salmonella</i> Typhimurium	WDCM 00031	Positive, score 2
(1) <i>Salmonella</i> Enteritidis	WDCM 00030	Positive, score 2
(1) <i>Escherichia coli</i>	WDCM 00012	Positive, score 2
(1) <i>Cronobacter sakazakii</i>	WDCM 00214	Positive, score 2
(2) <i>Escherichia coli</i>	WDCM 00012	± 30 % colonies / T ₀
(2) <i>Staphylococcus aureus</i>	WDCM 00034	± 30 % colonies / T ₀

(1) After 18 hours of incubation at 37 °C (inoculum ≤ 10² microorganisms)

(2) After 45-60 minutes of incubation at 20-25 °C

7 STORAGE / SHELF LIFE

Dehydrated media: 2-30 °C.

Ready-to-use media, in tubes, vials or flexible bags: 2-25 °C.

The expiration dates are indicated on the labels.

Prepared media in vials or tubes (*): 180 days at 2-25 °C.

(*) Benchmark value determined under standard preparation conditions, following manufacturer's instructions.

8 PACKAGING

Dehydrated media (25.5 g/L):

500 g bottle.....BK018HA
5 kg drum.....BK018GC

Dehydrated media (20 g/L):

500 g bottle.....BK131HA
5 kg drum.....BK131GC

Ready-to-use media:

50 x 9 mL tubes	BM05608
10 x 225 mL vials.....	BM01008
10 x 90 mL vials.....	BM05708
3 x 3 liter flexible bags	BM13108
2 x 5 liter flexible bags	BM13208
40 x 5 liter flexible bags	BM21408

9 BIBLIOGRAPHY

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10 ADDITIONAL INFORMATION

The information provided on the labels take precedence over the formulations or instructions described in this document and are susceptible to modification at any time, without warning.

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