BUFFERED PEPTONE WATER
Powdered and ready to use non-selective pre-enrichment liquid medium
for Salmonella detection in foodstuffs and water (ISO 6579) and for decimal dilutions of
feeding stuffs for microbiological examination (ISO 6887)

Typical formula (g/l)

- Peptone 10.0
- Sodium Chloride 5.0
- Disodium Hydrogen Phosphate anhydrous 3.5 *
- Monopotassium Phosphate 1.5
* (equivalent to Disodium Hydrogen Phosphate dodecahydrate 9 g/l)

Directions for powdered medium
Suspend 20 g in 1000 ml of cold distilled water; heat to dissolve, distribute into flasks of suitable
capacity and sterilise in the autoclave at 121°C for 15 minutes.
Final pH 7.0 ± 0.1

Description
Buffered Peptone Water is a non-selective enrichment broth, recommended for the pre-enrichment of
Salmonella in foodstuffs by ISO 6579 and for the non-selective pre-enrichment of Enterobacteriaceae
by ISO 8523. It is also suitable for the preparation of initial suspensions of powdered milk,
concentrated milk, yoghurt and other dairy products.
The Buffered peptone Water is prepared according the formulation given by ISO 6887-2 for the
preparation of initial suspension and decimal dilutions of food and animal feed stuffs for
microbiological examination

Technique
The procedure recommended by ISO 6579, is the following:
1. Add 25g of sample portion to 225ml of Buffered Peptone Water. If the required test portion is
other than 25g, use the suitable quantity of Buffered Peptone Water to yield approximately 1/10
dilution (m/v).
2. Incubate the initial suspension at 37°C for not less than 16 hours and not more than 20 hours.
3. Transfer 0.1ml of the pre-enriched culture to a tube containing 10ml of Rappaport Vassiliadis Soy
(RVS) Broth(cat. N° 401981) and 1ml to a flask containing 10ml of Mueller Kauffmann Novobiocin
Broth (MKTTn) (cat. N° 401745)
4. Incubate the inoculated RVS Broth at 41,5°C +/- 1°C for 24 h +/- 3 h
5. Incubate the inoculated MKTTn at 37°C +/- 1h for 24 h +/- 3 h.
6. Using the culture obtained in the RVS Broth inoculate by means of a 3mm loop, a large-size Petri
dish or two 90mm Petri dishes containing XLD Medium (Code 402206). Proceed in the same way
from the enrichment tube by inoculating a second plating medium (e.g. Chromogenic Salmonella
Agar, cat. N° 405350, or other suitable selective Salmonella plating-out medium chosen by the
laboratory).
7. Using the cultures obtained in MKTTn after 24 hours of incubation, repeat the procedure with the
same two selective plating-out media.
8. Invert the dishes and incubate at 37°C for 24 h +/- 3 h.
9. Examine for the presence of typical colonies. For confirmation take from each dish of each
selective medium, at least one typical or suspected colony and a further 4 colonies if the first is
negative. Streak the selected colonies onto the surface of Nutrient Agar and incubate at 37°C for
24hrs. Use pure cultures for biochemical and serological confirmation
Biochemical confirmation tests include: TSI Agar, Urea Agar, L-Lysine Decarboxylase Medium,
detection of β-galactosidase, VP reaction, indole detection. Serological confirmation includes the
detection of the presence of Salmonella O-, Vi- and H antigens by slide agglutination test.
Biochemical confirmation can be substituted with the rapid test MUCAP (code 191500). All the
MUCAP positive colonies must be serologically confirmed.
For the analysis of water, Harvey recommends the preparation of 25ml aliquots of the medium at
double concentration, inoculated with an equal volume of water and incubated for 15 hours at 37°C.
User quality assurance  (48 h-37°C)
Productivity control
*S.enteritidis* ATCC 13076: growth
*S.typhimurium* ATCC 14028: growth

Storage
Dehydrated medium: 10-30°C
User prepared tubes and flasks: 3 months at 2-8°C

References
• ISO 6579 Microbiology of food and animal feed stuffs Horizontal method for the detection of *Salmonella* spp. 2000.
• ISO 8523 Microbiology- general guidance for the detection of *Enterobacteriaceae* with pre-enrichment 1991-10-01
• ISO 6887-2 Microbiology -General Guidance for the preparation of dilutions for microbiological examinations

Packaging

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>4012781</td>
<td>Buffered Peptone Water</td>
<td>100 g (5 l)</td>
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<tr>
<td>4012782</td>
<td>Buffered Peptone Water</td>
<td>500 g (25 l)</td>
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<tr>
<td>4012784</td>
<td>Buffered Peptone Water</td>
<td>5 kg (250 l)</td>
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<tr>
<td>5112782</td>
<td>Buffered Peptone Water</td>
<td>6x 90ml ready to use flasks</td>
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<tr>
<td>5112783</td>
<td>Buffered Peptone Water</td>
<td>6x 225ml ready to use flasks</td>
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<tr>
<td>551278</td>
<td>Buffered Peptone Water</td>
<td>20 x 9 ml ready to use tubes</td>
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