

Buffered peptone water (ISO)

Code 84600.0500

Also known as

Peptone water buffered

Intended use

Non selective pre-enrichment liquid medium, used in the methods for the detection or enumeration of *Salmonella* spp. (ISO 6579), *L.monocytogenes* (ISO 11290-2) and *Enterobacteriaceae* (ISO 21528-1). Diluent for the all enumerations of microorganisms (ISO 6887 all parts).

Formula * - Composition in g/L

Enzymatic digest of casein.....	10,0
Sodium chloride.....	5,0
Disodium hydrogen phosphate anhydrous.....	3,5 **
Potassium dihydrogen phosphate.....	1,5

* Adjusted and/or supplemented as required to meet performance criteria

** equivalent to disodium hydrogen phosphate dodecahydrate 9 g/L

Final pH 7,0 ± 0,1 at 25 °C.

Instructions for preparation

Dissolve 20 g in 1 litre of purified water, by heating if necessary. Dispense the medium into flasks or tubes of suitable capacity. Sterilise in the autoclave at 121 °C for 15 minutes.

Principle of the method and general information

Enzymatic digest of casein supplies nitrogen and carbon needed for the growth of bacteria. The phosphate buffer maintains the correct pH that is important for the recovery of injured bacteria.

Bufferd peptone water is a multipurpose medium recommended for sample preparation and dilutions for all methods for enumeration of microorganisms (ISO 6887 all parts), as diluent for the enumeration of *L.monocytogenes* (ISO 11290-2), for the non-selective pre-enrichment broth for *Salmonella* spp. detection in food and animal feeding stuffs (ISO 6579) and for the non-selective pre-enrichment broth for the enumeration of *Enterobacteriaceae* in food and animal feeding stuffs (ISO 21528-1).

Instructions for use

For laboratory use only.

The experimental procedure depends on the purpose for which the liquid medium is used. Refer to the ISO Standards for the details of the procedures.

Quality Control

Physical characteristics:

Appearance of powder	Beige, fine, homogeneous, hygroscopic powder
Appearance of prepared medium	Pale yellow, limpid
pH (25°C)	7.0 ± 0.1

Microbiological characteristics:

Test Strains	Incubation T° / t / At.	Inoculation method	Growth characteristics	Productivity rate
<i>E. coli</i> ATCC 25922	20 °C / 1 h / AE	10 ⁴ /tube	Subculture on Tryptic Soy Agar plate	0.7>T ₁ /T ₀ >1.3
<i>L. monocytogenes</i> ATCC 13932	20 °C / 1 h / AE	10 ⁴ /tube	Subculture on Tryptic Soy Agar plate	0.7>T ₁ /T ₀ >1.3
<i>S. Typhimurium</i> ATCC 14028	37 °C/ 18 h / AE	DE	Good growth	DDI ≤ 1
<i>S. Enteritidis</i> ATCC 13076	37 °C/ 18 h / AE	DE	Good growth	DDI ≤ 1

Notes

T0: original test strain count, T1: test strain count after 1 hour incubation

DE: dilutions to extinction method

DDI : Highest dilution showing growth on reference culture medium (RB) - highest dilution showing growth on culture medium under test (TB)

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(considering the index as a positive value, e.g. 10^{-8} : 9)
°Target organisms: DDI₅ 1: the growth on TB shall be not more than 1 dilution lower than RB
Incubation atmosphere AE: aerobic incubation
Microbiological characteristics tested in accordance to ISO/TS 11133-2
ATCC is a registered trade mark of American Type Culture Collection; CB: strain obtained from Laboratory culture collection

References

- ISO 6887-1:1999 Microbiology of food and animal feeding stuffs -- 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
- ISO 6887-2:2003 Microbiology of food and animal feeding stuffs -- Preparation of test samples, initial suspension and decimal dilutions for microbiological examination -- Part 2: Specific rules for the preparation of meat and meat products
- ISO 6887-3:2003 Microbiology of food and animal feeding stuffs -- Preparation of test samples, initial suspension and decimal dilutions for microbiological examination -- Part 3: Specific rules for the preparation of fish and fishery products
- ISO 6887-4:2003 Microbiology of food and animal feeding stuffs -- 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.
- ISO 6887-5:2010 Microbiology of food and animal feeding stuffs -- Preparation of test samples, initial suspension and decimal dilutions for microbiological examination -- Part 5: Specific rules for the preparation of milk and milk products.
- 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
- ISO 21528-1:2004 Microbiology of food and animal feeding stuffs -- Horizontal methods for the detection and enumeration of *Enterobacteriaceae* -- Part 1: Detection and enumeration by MPN technique with pre-enrichment
- ISO 21528-2:2004 Microbiology of food and animal feeding stuffs -- Horizontal methods for the detection and enumeration of *Enterobacteriaceae* -- Part 2: Colony-count method
- ISO 6579 Microbiology of food and animal feed stuffs Horizontal method for the detection of *Salmonella* spp. 2000.

Storage conditions

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+10°C to 30°C and <60% RH).

Ordering information

84600.0500 Buffered peptone water (ISO)

Bottle of 500 g