

Phosphate Buffer, pH 7.2 (NCM0223)

Intended Use

Phosphate Buffer, pH 7.2 is used for the preparation of microbiological dilution blanks in a laboratory setting. Phosphate Buffer, pH 7.2 is not intended for use in the diagnosis of disease or other conditions in humans.

Description

The formula for phosphate buffer is specified by the American Public Health Association (APHA) for use in diluting test samples. Phosphate Buffer, pH 7.2 is specified for use in diluting water, dairy products and food for microbiological methods. In the examination of water and dairy products the addition of magnesium chloride is recommended.

This buffer is also referred to as Butterfield's Buffered Phosphate Diluent and recommended for examination of food. Phosphate Buffer, pH 7.2 stabilizes the pH of water used for dilutions.

Typical Formulation

Potassium Dihydrogen Phosphate 26.22 g/L
Sodium Carbonate 7.78 g/L
Final pH: 7.2 ± 0.2 at 25°C

Supplement

Magnesium Chloride, 5 mL

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution

Refer to SDS

Preparation

Stock Solution

1. Dissolve 34 g of the medium in one liter of purified water.
2. Mix thoroughly.
3. Autoclave at 121°C for 15 minutes. Store under refrigeration.

Working Solution

1. Add 1.25 mL of Stock Solution and 5 mL of a Magnesium Chloride solution (81.1 g $\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$ per liter of purified water) to purified water and make up to one liter.
2. Dispense into bottles or tubes to provide 99 ± 2.0 mL, 9 ± 0.2 mL or other appropriate quantities.
3. Autoclave at 121°C for 15 minutes.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing, and white to off-white.

Prepared Appearance: Prepared buffer is clear to slightly hazy / opalescent with or without trace to light precipitate and colorless.

Test Procedure

Refer to appropriate references for a complete discussion and use of Phosphate Buffer, pH 7.2.

Results

Refer to appropriate references for results following test procedures.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Technical Specification Sheet



Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. Greenberg, Trussell, and Clesceri (eds.). 2017. Standard methods for the examination of water and wastewater, 23rd ed. American Public Health Association, Washington, D.C.
2. Richardson. (ed.). 2004. Standard methods for the examination of dairy products, 17th ed. American Public Health Association, Washington, D.C.
3. [www.fda.gov/Food/ScienceResearch/LaboratoryMethods/BacteriologicalAnalytical manualBAM/default.htm](http://www.fda.gov/Food/ScienceResearch/LaboratoryMethods/BacteriologicalAnalytical%20manualBAM/default.htm).

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