PHOSPHATE BUFFER, pH 7.2 (7380)

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.

Product Summary and Explanation
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 water¹ and dairy products² 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.² Phosphate Buffer, pH 7.2 stabilizes the pH of water used for dilutions.

Principles of the Procedure
Phosphate Buffer, pH 7.2 is used in the preparation of dilution blanks for use in microbiological testing. Phosphate Buffer is used rather than unbuffered water in order to standardize this potential variable due to the wide variation in the pH of distilled water from multiple sources.

Formula / Liter

| Supplement          | 26.22 g Potassium Dihydrogen Phosphate | 7.78 g Sodium Carbonate |

*Magnesium Chloride, 5 mL

*Final pH: 7.2 ± 0.2 at 25°C

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

Precautions
1. For Laboratory Use Only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
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.
4. *Final pH is taken after Phosphate Buffer, pH 7.2 has been autoclaved and cooled to 25°C (room temperature).

Working Solution
1. Add 1.25 mL of Stock Solution and 5 mL of a Magnesium Chloride solution (81.1 g MgCl₂ • 6H₂O 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.
4. *Final pH is taken after Phosphate Buffer, pH 7.2 has been autoclaved and cooled to 25°C (room temperature).

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.

Storage
Store sealed bottle containing the dehydrated medium at 2 - 30°C. 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.

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.

Packaging
Phosphate Buffer, pH 7.2 Code No. 7380A 500 g
7380B 2 kg
7380C 10 kg

References

Technical Information
Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 or fax us at (517)372-2006.