



PRODUCT SPECIFICATION SHEET

Phosphate Buffer, APHA, pH 7.2 (DM522)

Intended Use

Phosphate Buffer, APHA, pH 7.2 (DM522) is recommended for preparation of dilutions and blanks for the examination of water, dairy products, food, eating utensils and other specimens.

Product Summary and Explanation

The formula for phosphate buffer was originally specified by the American Public Health Association (APHA) for use in diluting test samples. It is used as a diluent in the examination of water, dairy products, foods and other specimens. Phosphate Buffer, APHA, pH 7.2 is also recommended for use with the addition of magnesium chloride.^(1,2) As per APHA and FDA,^(3,4) this medium is also referred to as Butterfields Buffered Phosphate Diluent and is mentioned without Magnesium chloride and is recommended for examination of food.⁽⁵⁾ Phosphate Buffer, pH 7.2 stabilizes the pH of water used for dilutions.

Principles of the Procedure

Phosphate buffer is used in the preparation of dilution blanks for use in microbiological testing. Phosphate buffer is preferred over unbuffered water in order to standardize this potential variable due to the wide variation in the pH of distilled water from multiple sources. Sodium carbonate is a pH regulator.

Formula / Liter

Ingredients	Gms / Liter
Monopotassium phosphate	26.22
Sodium carbonate	7.78
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

1. Suspend 34 grams of the medium in one liter of distilled water.
2. Dispense and autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
3. The pH after autoclaving and cooling to room temperature should be 7.2 ± 0.2.

Quality Control Specifications

Dehydrated Appearance	White to cream homogeneous free flowing powder
Prepared Medium	Colourless clear solution without any precipitate
Reaction of 3.4% Solution	pH : 7.2 ± 0.2 at 25°C
Gel Strength	Not Applicable





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Expected Cultural Response: Not Applicable

Test Procedure

Refer appropriate references for standard test procedures.

Results

Refer appropriate references and procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

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

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Phosphate Buffer, APHA, pH 7.2

Product Code : DM522

Available Pack sizes : 100gm / 500gm

References

1. Eaton A. D., Clesceri L. S. and Greenberg A. W., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.
2. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
3. Downes F. P. and Ito K., (Ed.). 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., American Public Health Association, Washington, D.C.
4. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.
5. Richardson. (ed.). 1985. Standard methods for the examination of dairy products, 15th ed. American Public Health Association, Washington, D.C..

Further Information

For further information please contact your local MICROMASTER Representative.





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MICROMASTER LABORATORIES PRIVATE LIMITED

DM522PSS,QAD/FR/024,Rev.00/01.01.2018

Unit 38/39, Kalpataru Industrial Estate,




Near Runwal Estate, Behind 'R-Mall' ,Ghodbunder Raod,

Thane (W) - 400607. M.S. INDIA.

Ph: +91-22-25895505, 4760, Cell: 9320126789.

Email: micromaster@micromasterlab.com

sales@micromasterlab.com

Prepared By	Checked By	Approved By
 01.01.2018	 01.01.2018	 01.01.2018
Microbiologist	Head Quality Control	Head Quality Assurance

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