Buffer Solution, pH 7.0 ± 0.02 R063

Intended use

Buffer solution, pH 7.0±0.02 is used to establish and maintain an ion activity within narrow range. It is most commonly used to establish hydrogen-ion activity for the calibration of pH meters, in analytical procedures. It is also used to maintain stability of various dosage forms.

Composition**

Ingredients	-
Sodium dihydrogen phosphate	1.20 g
Disodium hydrogen phosphate	0.885 g
Distilled water	1,000.0 ml

**Formula adjusted, standardized to suit performance parameters

Directions

1. For Buffer solution, pH 7.0 ± 0.02 follow appropriate direction as per application

Principle And Interpretation

Buffer is defined as a solution which resists changes in the activity of an ion on addition of substances that are expected to change the activity of that ion. Buffer capacity refers to the amount of material that may be added to solution without causing a significant change in ion activity. Buffered solutions are systems in which the ion is in equilibrium with substances capable of removing or releasing the ion. For successful completion of many pharmacopeial tests and assay requires adjustment or maintenance of a specified pH by addition of buffer solutions .In pH measurements standard buffer solutions are required for reference purposes.

Type of specimen

Biological sample

Specimen Collection and Handling

1. Follow appropriate techniques for handling specimens as per established guidelines

Warning and Precautions

Non in Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Buffers usually work well at a pH close to the pKa value. If too much acid is added to the buffer, or if the concentration is too strong, extra protons remain free and the pH will fall sharply.
2. Becomes slowly contaminated if not handled properly.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

- **Appearance :** Colourless liquid
- **Clarity :** Clear with no insoluble particles.
- **Results :** The buffer solution gives a pH value of 7.0 ± 0.02 at 25°C

Storage and Shelf Life

On receipt store between 2-8°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Reference

1. U.S. Pharmacopeia USP 42, NF37 vol 4.
2. Delloyd's Lab Tech resources reagent and solution: Preparation of pH buffer solutions.
3. Lapage S., Shelton J. and Mitchell T., 1970, Methods in Microbiology', Norris J. and Ribbons D., (Eds.), Vol. 3A, Academic Press, London.
4. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins, Baltimore

Storage temperature

Do not use if package is damaged

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