



*Buffer solution, pH 4.0 ± 0.02

R064

Buffer solution, pH 4.0 ± 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

Disodium hydrogen phosphate, 12H ₂ O	8.954gm
Potassium dihydrogen phosphate	3.4023gm
Distilled water	1000.00ml

**Formula adjusted, standardized to suit performance parameters

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.

Quality Control

Appearance

Colourless liquid

Clarity

Clear with no insoluble particles.

Result

The buffer solution gives a pH value of 4.0 ± 0.02 at 25°C.

Storage and Shelf Life

Store between 2°C to 8°C in tightly closed container. Use before expiry date on label.

Reference

- 1) U.S. Pharmacopeia USP 37, NF32.
- 2) Delloyd's Lab Tech resources reagent and solution: Preparation of pH buffer solutions.

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