Formaldehyde Fixatives

Ordering Information

Product	Product Number	Packaging
10% v/v Buffered Formaldehyde	3933.1000	1 liter
10% v/v Buffered Formaldehyde	3933.5000PC	5 liter
10% v/v Buffered Formaldehyde	3933.9010	10 liter
10% v/v Buffered Formaldehyde	3933.9010PE	10 liter
10% v/v Buffered Formaldehyde	3933.9020	20 liter
10% v/v Buffered Formaldehyde	3933.9020PE	20 liter
10% v/v Buffered Formaldehyde	3933.9200	200 liter
19% g/v Buffered Formaldehyde	3858.9020	20 liter
38% g/v Buffered Formaldehyde	3859.5000	5 liter
38% g/v Buffered Formaldehyde	3859.9010	10 liter
Tap for use with the 5, 10 and 20 liter cubitainers	3508	
Aeroflow tap for use with 10 and 20 L HDPE can	4571	

Fig.3 20 liter HDPE 10% v/v Buffered Formaldehyde

Introduction

Effective and reproducible fixation requires the right concentration of buffered formaldehyde. The 40 mM phosphate buffer J.T.Baker® brand formaldehyde fixatives provide optimal performance and results in immunostaining. The J.T.Baker® brand formaldehyde fixatives are available in both ready-to-use and concentrated solution.

Features and Benefits

The consistency of pH neutral embedded tissue is crucial in histopathology. Stains and dyes work and immunoglobulins react better at neutral pH. Avantor offers phosphate buffered (pH 7) formaldehyde fixatives, both as ready-to-use and concentrated solutions that have to be diluted before use.

Formalin is a saturated solution of 37% formaldehyde and water. 4% (w/v) formaldehyde is the same as 10% v/v formaldehyde. Commonly used for fixation is the 10% (v/v) formaldehyde. The concentrates are available as 5 or 10 times concentrates in 1, 5, 10 and 20 liter packs.

All fixatives are intended to be used in vitro for the examination of specimens derived from the human body.

The fixatives result in improved fixation, no protein denaturation, and optimized results in immunostaining. Methanol stabilization allows the fixatives to have a shelf life of 2 years. For easy dispensing, taps are available for polycubes and HDPE cans.

Composition

The formaldehyde fixatives contain water, formaldehyde, phosphate buffer, and methanol (stabilizer).

Stability and Storage

For long-term storage, store 4% formaldehyde solution at room temperature (18 - 30°C). Short-term exposure to lower (to -15°C) and higher temperatures (>30°C) has been tested and did not impact the formaldehyde concentration.

Formaldehyde fixatives are stable for two years when the bottles are kept closed. Formaldehyde concentrates should be stored at room temperature (18 - 30°C). Cooling formaldehyde concentrates past room temperature may cause irreversible polymerization. Used solutions and solutions that are past their shelf-life must be disposed of, according to local disposal guidelines

Procedure

4% (w/v) formaldehyde solution is ready-to-use and doesn't have to be diluted. 38% (w/v) formaldehyde solution should be diluted before use with distilled or deionized water. Dilute 10 fold to obtain a 3.8% w/v (10% v/v) formaldehyde solution. It is not advised to use concentrated formaldehyde directly, because it can destroy the protein and antigen structure.