

Neutral Buffered Formalin Fixative (10%)

Introduction

The purpose of fixation is to preserve the original morphological structure of cells and tissues. Fixatives prevent autolysis of tissues and cells by endogenous lysosomal enzymes while also inhibiting the growth of bacteria and molds. Fixatives alter the internal structure of proteins through mechanisms such as coagulation and the formation of additive compounds, thereby inactivating enzymes. In addition, fixatives physically alter the nucleus and extracellular components. Commonly used fixatives include aldehydes, mercury-containing compounds, alcohols, oxidizing agents, and picrate salts. Among these, formaldehyde (an aldehyde) and ethanol (an alcohol) are the most frequently used.

Neutral Buffered Formalin (10%) is mainly composed of formaldehyde, phosphate salts, and deionized water. It is suitable for fixing most tissues.

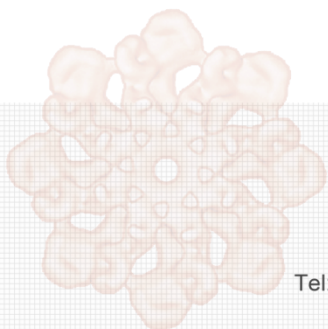
Protocol

1. Perform the fixation according to specific experimental requirements. Control the fixation time to 1–4 hours per millimeter of tissue thickness. Larger specimens should be fixed for a longer period as appropriate.
2. Fixed tissues can be stored long-term in Neutral Buffered Formalin (10%) or 70% ethanol.

Note

1. Primary use: Common fixatives include aldehyde-based and alcohol-based fixatives.
2. Neutral Buffered Formalin (10%) is somewhat irritating and corrosive. Please operate carefully in a well-ventilated area and avoid inhalation.
3. For long-term storage (more than 1 month without use), it is recommended to keep the product in a cool, dark place.
4. Fixation time varies depending on the thickness of the tissue section. Routine biopsy specimens are ideally 2–4 mm thick, generally not exceeding 6 mm. When selecting specimens, try to ensure moderate tissue thickness to facilitate fixative penetration.
5. A sufficient volume of fixative should be used. Generally, the volume ratio of fixative to tissue block should exceed 10:1. If the volume is insufficient, the fixative can be replaced 1–3 times during the fixation period.
6. Temperature significantly affects fixation. Raising the temperature can accelerate fixation, but the temperature should not be too high.

7. Fresh tissue should be fixed promptly after removal. If immediate fixation is not possible, the tissue should be stored in physiological saline and sent for examination as soon as possible.
8. Storage and transport conditions: Store at room temperature; effective for 2 years. Transport at room temperature.
9. This product is for research use only.



APEX^{BIO} Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

