

---

**(FOR RESEARCH USE ONLY. DO NOT USE IT IN CLINICAL DIAGNOSIS !)**

---

## Tissue Fixation Solution / 4% Paraformaldehyde (without DEPC)

**Catalog No:** E-IR-R113

**Size:** 100 mL / 500 mL / 1000 mL

Cat.	Products	100 mL	500 mL	1000 mL	Storage
E-IR-R113	4% Paraformaldehyde (without DEPC)	100 mL	500 mL	500 mL×2	-20°C
<b>Manual</b>				<b>One Copy</b>	

This manual must be read attentively and completely before using this product.

If you have any problems, please contact our Technical Service Center for help.

Phone: 240-252-7368(USA) Fax: 240-252-7376(USA)

Email: [techsupport@elabscience.com](mailto:techsupport@elabscience.com)

Website: [www.elabscience.com](http://www.elabscience.com)

Please kindly provide us the lot number (on the outside of the box) of the kit for more efficient service.

## Introduction

4% Paraformaldehyde tissue fixation solution is widely used in the detection of tissue, tissue slice, cell and other biological sample fixation solutions such as immunohistochemistry (IHC), immunofluorescence (IF), immunocytochemistry (IC), flow cytometry (FACS). This product is prepared in PBS solution and can be directly used for tissue or cell fixation without dilution. If a lower concentration of paraformaldehyde is needed, PBS can be used as dilution buffer.

4% Paraformaldehyde tissue fixation solution has strong penetrability and fixation, which can make the tissue harden and it is good for slicing. It will cause less tissue shrinkage, less damage and mild, which can well preserve the inherent substance and maintain the antigenicity and fine structure of the tissue. In addition, 4% Paraformaldehyde can be used to fix and preserve fat and lipid substances.

This product has good fixation effect and wide applications. It is suitable for the fixation of various common cells or tissues. It has good fixation effect on skin, muscle, viscera, etc. It mainly acts on protein, but can't fix uric acid and sugar, etc.

This product does not contain DEPC and it is not recommended for in situ hybridization or other experiments requiring detection of nucleic acids.

It is recommended that 1 ml of fixed solution is needed for each sample fixation.

## Experimental Procedure

1. For Cell Samples
  - 1) Remove the culture medium, add 1 ml 4% Paraformaldehyde tissue fixation solution to one hole of each six-hole plate.
  - 2) For other cell samples such as cell smear, add appropriate amount of 4% Paraformaldehyde tissue fixation solution to cover the sample fully.
  - 3) It is recommended to fix at room temperature for 10~20 min, or for a long time, such as 1~2 h.
  - 4) Wash the cells to remove residual paraformaldehyde.
2. For Tissue Slices
  - 1) Add 4% Paraformaldehyde tissue fixation solution to cover the slice fully.
  - 2) It is recommended to fix at room temperature for 10~20 min, and it can be fixed for a long time such as 1~2 h when the slice is thick.
  - 3) Wash the slices to remove residual paraformaldehyde.
3. For Tissue Block Samples
  - 1) Immerse the tissue in 4% Paraformaldehyde tissue fixation solution and fix it at room temperature or 4 °C for 2~24 h.
  - 2) It is recommended to fix the tissue in 8 h, unless the tissue block is too large to penetrate.
  - 3) Put the tissue into a centrifugal pipe with distilled water for cleaning, and change the water every 15~30 min for 6~8 times.
  - 4) It is recommended to rinse in a shaker or rinse with running water for 1~2 h.
  - 5) Gradient dehydration and embedding.

**Tip: If the tissue is not to be prepared as paraffin embedded tissue in time, please store the tissue in 70~75% alcohol.**

## Storage

Store at -20°C for 12 months.

## Cautions

1. If the product is stored for a long time, the aldehyde group may be oxidized to acid, which will reduce the pH of the solution, thus will affect the subsequent staining.
2. Different cell or tissue samples need different fixation time. The fixation time should be adjusted according to the type of cell or tissue and the size of tissue block.
3. Although the effect of 4% Paraformaldehyde tissue fixation solution is mild, it may harden the tissue. If the fixation time is too long, the tissue will become brittle and fragile. Therefore, the fixation time should not exceed 24 hours.
4. Polyoxymethylene can exist in the fixed cell or tissue samples for a long time. There will still be residues after washing with appropriate detergent or water for several hours. Therefore, the subsequent experimental results are easy to be affected by aldehyde group, and the residual polyoxymethylene must be washed away as much as possible.
5. 4% Paraformaldehyde tissue fixation solution fix the cells or tissue samples need to be repaired before immunostaining or other subsequent operations.
6. This product is harmful to human body. Please be careful during operation and pay attention to effective protection to avoid direct contact with human body or inhalation.
7. This product is for research use only. It couldn't be used for clinical diagnosis or treatment, food or medicine, and can't be stored in residence.
8. For your safety and health, please wear the lab coat and disposable gloves before the experiments.