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## Davidson's fixative

Cat. No.: D1526176 | Pack size: 100ml; 500ml | Storage: Room temperature

### Overview

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The purpose of fixation is to preserve the original morphological structure of cells and tissues. Fixatives prevent autolysis of tissues and cells triggered by endogenous lysosomal enzymes and suppress the growth of bacteria and fungi. Through coagulation and adduct formation, fixatives alter the internal structure of proteins to inactivate enzymes and induce physical changes to cell nuclei and extracellular components. Fixatives are mainly classified into aldehyde, mercury, alcohol, oxidant and picrate categories, among which formalin (aldehyde type) and ethanol (alcohol type) are widely adopted.

Davidson's Fixative, also named Hartmann's Fixative, is composed of 15% ethanol, 5% acetic acid, formaldehyde and deionized water. It contains no dyes, mercury or other heavy metals. As a rapid fixative, it delivers excellent nuclear preservation, generates minimal formalin pigment, causes low tissue shrinkage and retains superior morphological details. It is applicable to routine histopathological examinations, especially for tumors, bone marrow, gynecological specimens, fatty breast tissues and biopsies. It can also be used for overnight fixation of testicular biopsies and fatty lymph nodes. Moreover, Davidson's Fixative is the preferred fixative for whole-eye specimens, providing optimal tissue preservation and preventing retinal detachment. It is widely used for rapid dehydration, routine fixation and fast fixation for frozen sections, and can serve as a preservative for tissue samples. This reagent is for research use only and not intended for clinical diagnosis.

### Operating Procedures (For Reference Only)

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1. Immerse fresh tissues in Davidson's Fixative and fix at room temperature for 1–2 days. Fixation of small samples shall not exceed 24 hours. For specimens intended for subsequent immunohistochemistry, fixation time shall be within 24 hours; for routine histopathological tests, fixation shall not exceed 48 hours.
2. Take tissue specimens out of Davidson's Fixative and rinse briefly with tap water.
3. After fixation, store samples in 10% formalin or 70% ethanol.

### Precautions

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1. This fixative contains formaldehyde which is harmful to human health. Operate cautiously in a well-ventilated area and avoid inhalation of vapors.

2. Fixation time varies with tissue thickness. Proper trimming facilitates penetration of fixative. The optimal thickness of routine biopsy tissues is 2–4 mm and shall not exceed 6 mm.
3. Use sufficient volume of fixative; the volume ratio of fixative to tissue block shall be greater than 10:1. Replace the fixative 1–3 times during fixation if the volume is insufficient.
4. Temperature has a remarkable impact on fixation. Higher temperature accelerates fixation, yet excessive temperature must be avoided.
5. Fix fresh tissues immediately after dissection.
6. For hard specimens such as eyeballs, store in 70% ethanol for 1 day after fixation, then transfer to 90% ethanol for another day, followed by absolute ethanol for 1 day to improve sectioning performance.
7. All fixation operations must be carried out in a fume hood with lab coat and disposable gloves worn for personal safety.
8. Use the reagent promptly after opening to avoid compromised experimental results.

## Specifications

| Item                    | Information                                      |
|-------------------------|--------------------------------------------------|
| Synonyms                | Hartmann's Fixative                              |
| Specifications & Purity | BioReagent                                       |
| Stability And Storage   | Store at room temperature long term (12 months). |
| Storage                 | Room temperature                                 |
| Shipped In              | Normal                                           |

## Contact & Global Offices

Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

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## Limitations & Disclaimer

- For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.
- This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
- Where any kit component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.
- Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating the kit for their specific application.
- Aladdin product labels, SDS, COA, and approved specifications take precedence over this document. If product formulation, label, SDS, storage conditions, pack size, or quality specifications change, this document would be reviewed and reissued.