

JYBL-I Decalcifying Solution

Cat. No.: J1525466 | Pack size: 500 mL | Storage: Room temperature

Overview

During routine tissue sectioning, tissues containing bone or calcified lesions cannot be directly embedded in paraffin for sectioning. Due to the density difference between calcium and paraffin, intact sections are difficult to obtain. For calcium-containing tissues, decalcification should be performed after tissue fixation, or fixation and decalcification can be carried out simultaneously, followed by subsequent procedures including dehydration, clearing, infiltration, embedding and sectioning. A variety of decalcifying reagents are available, including organic acids, inorganic acids, ethylenediaminetetraacetic acid (EDTA) and electrolytic decalcification. As a superior chelating decalcifier, EDTA causes minimal damage to tissue structure and well preserves endogenous enzymes within tissues. Tissues decalcified with EDTA are compatible with immunohistochemistry and in situ hybridization staining. However, EDTA decalcification is extremely time-consuming, typically requiring weeks to several months to complete.

JYBL-I Decalcifying Solution is mainly composed of dilute acid, formaldehyde, formic acid and other components. Its advantages are as follows:

- ① Fast decalcification, which can be finished within 24 to 36 hours;
- ② Slight damage to tissue structure;
- ③ Thorough decalcification. This product is a rapid decalcifying reagent recommended for decalcification of routine pathological bone tissue samples with low tissue damage. Chemical methods are not suitable for determining the decalcification endpoint for this product.

Product Series Overview

Cat. No.	Product Name	Main Components	Decalcification Time	Tissue Damage Risk	Core Advantages	Applicable Specimen Types
J1525466	JYBL-I Decalcifying Solution	Dilute acid, formaldehyde, formic acid	24–36 h	Relatively low	Balanced speed and tissue preservation	Routine bone tissue specimens
J1529419	JYBL-II Decalcifying Solution	Dilute acid, formaldehyde, formic acid	Approx. 24 h (faster than I)	Moderate (slightly higher than I)	Faster decalcification than I	Routine bone tissue specimens

Cat. No.	Product Name	Main Components	Decalcification Time	Tissue Damage Risk	Core Advantages	Applicable Specimen Types
J1529418	JYBL-III Decalcifying Solution	Formaldehyde , 50% formic acid	Room temperature: 2–3 days	Relatively minimal (formic acid is the mildest)	Minimal tissue damage; superior morphology preservation	Special bone tissue specimens
J1529417	JYBL-IV Decalcifying Solution	Formaldehyde , formic acid (acid-free formulation)	37°C incubation: 2–3 h	Relatively low; temperature control required	Fastest decalcification; designed for bone marrow biopsy	Bone marrow biopsy specimens

Required Self-prepared Materials:

1. PBS;
2. Distilled water;
3. Heating device or microwave oven.

Operating Procedures (For Reference Only):

1. Avoid overly thick sampling when preparing bone tissue for decalcification.
2. Rinse fixed tissues with PBS.
3. Wash tissues with distilled water.
4. Immerse tissues in JYBL-I Decalcifying Solution for decalcification. Incubate at 37 °C to accelerate the decalcification process if needed.
5. Rinse the tissues several times with distilled water.
6. Perform standard dehydration and embedding procedures.

Precautions:

1. Decalcification generally takes 24-36 hours for bone tissue blocks with a thickness of 5 mm.
2. Moderate heating accelerates decalcification; the temperature should not exceed 37-40 °C. Excessively high temperature will lead to loose and decomposed bone tissue, and the temperature must never go above 60 °C.

- 3.Ensure complete decalcification to avoid insufficient or over-decalcification. Minimize decalcification duration while guaranteeing qualified sectioning quality to prevent tissue damage caused by prolonged decalcification.
- 4.Do not use metal containers during decalcification; glass containers are highly recommended.
5. Bone tissue must be fixed prior to decalcification, or fixation and decalcification shall be conducted concurrently. Decalcification before fixation is forbidden to reduce tissue damage.
6. Check the decalcification progress regularly. Over-decalcification will aggravate tissue damage and interfere with staining outcomes.
7. Wear a lab coat and disposable gloves during operation for personal safety and health protection.

Determination of Decalcification Endpoint (Physical Method):

Use acupuncture, pinching or clamping to test tissues. Terminate decalcification when the bone tissue softens or no resistance is felt during needling. This physical detection method may damage tissue structure, so excessive force should be avoided.

Specifications

Item	Information
Specifications & Purity	BioReagent
Stability And Storage	Store at room temperature long term (12 months).
Storage	Room temperature
Shelf life	1 year
Shipped In	Normal
Application	Bone Decalcification

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.

NORTH AMERICAN SALES, SUPPORT & GENERAL INQUIRIES Aladdin Scientific Corporation 14078 Meridian Parkway, Riverside, CA 92518, USA Phone: 1-833-552-7181 Sales: sales@aladdinsci.com Customer Service: custserv@aladdinsci.com	EU SALES, LOGISTICS & LOCALIZED SUPPORT Aladdin Biochem Deutschland GmbH Westring 2, 33142 Büren, Germany Phone: +02951 9383958 Support: support.eu@aladdinsci.com
--	---

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.