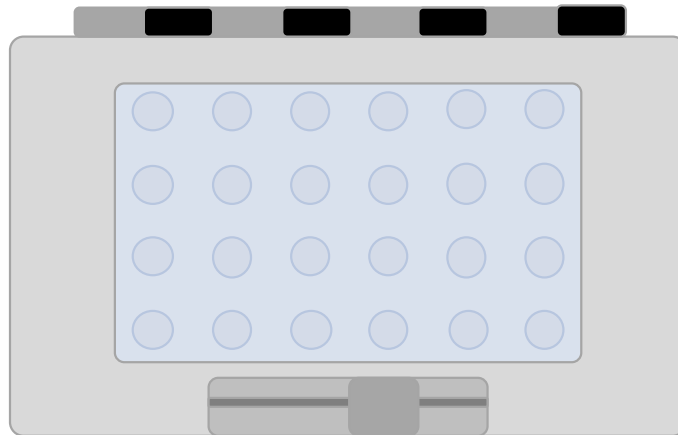


DriBank Labs



The Dri•Bank Mailer™

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Limited Warranty and Limitation of Liability

Inclined Biomedical Technologies, Inc. (IBT) D/B/A DriBank Labs warrants to Customer that (a) Products supplied by IBT will be free from defects in material and workmanship for 30 days from date of shipment ("Warranty Period"); and (b) title to all Products will pass to Customer as provided herein, free and clear of any security interests and liens. Warranties are made only to Customer and are not transferable and do not extend to the benefit of any other person or entity. THE FOREGOING WARRANTIES ARE IBT'S SOLE AND EXCLUSIVE WARRANTIES AND ARE IN LIEU OF ALL OTHER REPRESENTATIONS, GUARANTEES AND WARRANTIES (WHETHER EXPRESS, IMPLIED, ORAL, WRITTEN, STATUTORY OR OTHERWISE) WITH RESPECT TO THE PRODUCTS (INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF FITNESS FOR ANY PARTICULAR PURPOSE, MERCHANTABILITY, NON-INFRINGEMENT, RESULTS, AND WARRANTIES ARISING BY CUSTOM, TRADE USAGE, PROMISE, EXAMPLE OR DESCRIPTION); ALL OF WHICH ARE EXPRESSLY DISCLAIMED.

Warranty Return Procedure: Customer must notify IBT in writing of all claims for defective Products within 30 days after Buyer's receipt of the Products and will reasonably cooperate in IBT's investigation of all warranty claims. After IBT's review of such written notice, IBT, at its sole discretion, may provide a Return Material Authorization ("RMA") to Customer. IBT may refuse any Products not timely notified or lacking an RMA provided by IBT. Customer will properly clean and rinse the Products, removing all biological, chemical, radioactive and hazardous residue. IBT may require Customer sign and deliver a properly completed certificate of decontamination prior to returning any Products. Then, Customer may return the allegedly defective Products to IBT with all costs prepaid by Customer. Returned Products must include the following information: Customer name and address, IBT shipping order number, number and date of invoice, IBT RMA Number, and written explanation of reason for return. All replaced parts will become the property of IBT.

CUSTOMER'S SOLE AND EXCLUSIVE REMEDY, AND IBT'S SOLE LIABILITY, ARISING OUT OF OR RELATING TO PRODUCTS OR ANY BREACH OF WARRANTY IS LIMITED TO, AT IBT'S OPTION AND EXPENSE: (A) IBT REPAIRING DEFECTIVE PRODUCT; (B) IBT REPLACING DEFECTIVE PRODUCT; OR (B) IBT CREDITING CUSTOMER'S ACCOUNT FOR AMOUNTS PAID WITH RESPECT TO DEFECTIVE PRODUCTS. SUCH REPAIR, REPLACEMENT, OR CREDIT WILL CONSTITUTE FULFILLMENT OF ALL LIABILITIES IN RESPECT OF SUCH PRODUCTS.

In no event will IBT have any obligation for a warranty claim as the result of (i) normal wear and tear; (ii) damage, abuse, misuse, alteration, tampering, fault or negligence caused by anyone other than IBT; (iii) use of the Product in a manner for which it was not designed; (v) causes external to the Product; and (vi) improper storage and handling of the Product. If IBT provides repair services or replacement parts that are not covered by this warranty, Customer will pay IBT at IBT's then-prevailing rate of the Products.

IBT PROVIDES PRODUCTS ON AN INDIVIDUAL "PER ITEM" BASIS. TO THE FULLEST EXTENT ALLOWED BY LAW, IBT'S TOTAL LIABILITY FOR ANY CLAIM, LOSS OR DAMAGE ARISING OR RELATING TO ANY PRODUCT(S) OR THE PERFORMANCE OR BREACH OF THIS AGREEMENT WILL BE LIMITED TO THE AMOUNTS THAT IBT ACTUALLY RECEIVED FROM CUSTOMER FOR THE APPLICABLE ITEMS. TO THE FULLEST EXTENT ALLOWED BY LAW, IN NO EVENT WILL IBT BE LIABLE TO CUSTOMER FOR LOSS OF ACTUAL OR ANTICIPATED PROFITS OR REVENUES, LOST OR DECREASED USE OR PRODUCTION, COVER, DOWNTIME, LOSS OF GOODWILL, THIRD PARTY.

CLAIMS, OR FOR ANY INDIRECT, SPECIAL, INCIDENTAL, EXEMPLARY, CONTINGENT, CONSEQUENTIAL OR PUNITIVE DAMAGES OR LOSSES OF ANY TYPE OR KIND REGARDLESS.

WHETHER OR NOT (I) SUCH CLAIMS ARE BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), WARRANTY, PRODUCT LIABILITY, INDEMNITY, CONTRIBUTION, STRICT LIABILITY OR ANY OTHER LEGAL THEORY; (II) THE CLAIMS, DAMAGES OR LOSSES ARE

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FORESEEABLE; OR (III) ADVISED OF THE POSSIBILITY OF SUCH CLAIMS, DAMAGES OR LOSSES.

Repair

All products returned for warranty or non-warranty repair should be accompanied by the following: your name, company's name, address, telephone number, and proof of purchase. Additionally, please include a brief description of the problem or the service requested. Non-warranty repair or replacement charges should be remitted in the form of a check, a money order, credit card with expiration date, or a purchase order made payable to Inclined Biomedical Technologies, Inc.

In-Warranty Repairs and Replacement

Please read the warranty statement and check your product thoroughly before requesting repair. During the warranty period and defective product can be returned to IBT for an exchange for the same or like product. In-Warranty repair and replacement units can be sent to IBT (see address below).

Non-Warranty Repairs and Replacement

Non-Warranty repairs should be sent to IBT. Contact IBT for current repair and replacement rates.

Inclined Biomedical Technologies, Inc. d/b/a DriBank Labs

PO Box 24392
Minneapolis, Minnesota 55424
USA

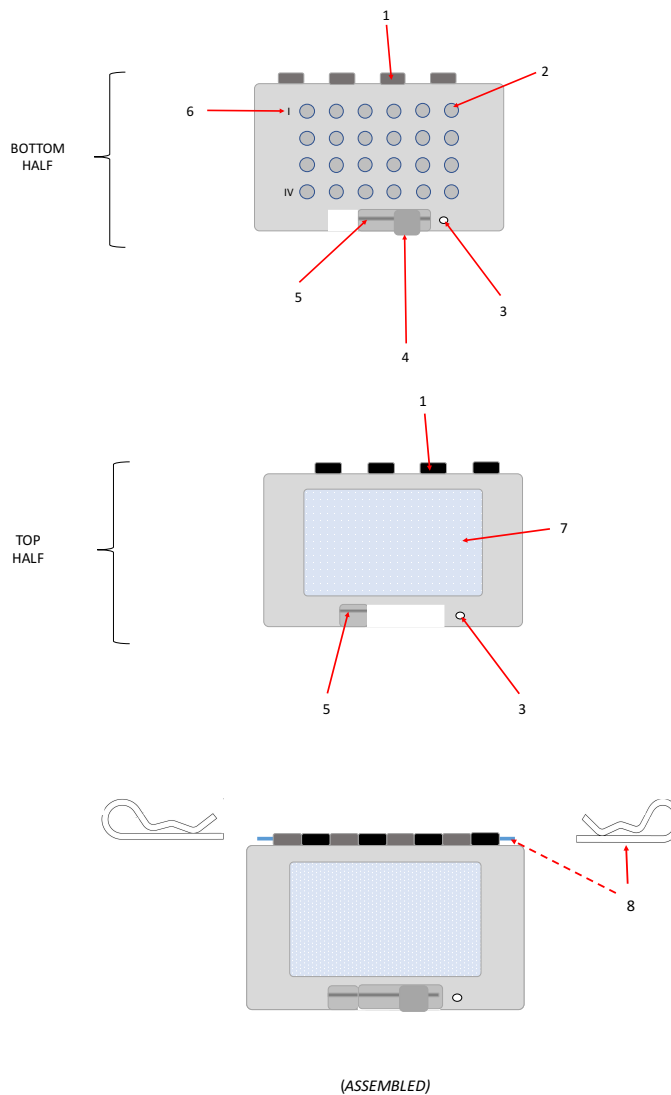
info@dribanklabs.com

+1 844 599 1472

www.dribanklabs.com

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INSIDE THE BOX



- 1 – Hinge
- 2 – Well*
- 3 – Locking Port
- 4 – Slide Closure (removable)
- 5 – Slide Closure Track
- 6 – Well Designator**
- 7 – Desiccant
- 8 – Hinge Pin Clips (removable)
- 9 – Closed Foam Gasket (top half, not shown)
- 10 – Hydrophobic Membrane (top half, not shown)
- 11 – Non-Slip Rubber Feet (bottom half, not shown)

* - NOTE: 10 μ L maximum capacity when all wells are in use. Each well can hold a maximum of 50 μ L.

** - NOTE: Well numbering begins with the UPPER LEFT well as number one (I) and proceeds DOWNWARD and to the RIGHT. Hence the lower right well is number 24.

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INTRODUCTION

The Dri•Bank Mailer™ is a specially designed patented product that can preserve, store or ship a variety of small biological specimens at room temperature. The Mailer does not require toxic chemical fixatives, matrices, coatings, or electrical power to function. Rather, it utilizes powerful desiccants to dry samples within a static micro-environment. This process has been shown to attenuate decomposition mechanisms^{1,2,3} required of hydrolytic enzymes such as nucleases and proteases, namely sequestering water from their activity. To date, data from the larger Dri•Bank® System has been used to preserve and store DNA, RNA, and an assortment of protein biomarkers from samples such as biopsy specimens, a breast cancer cell line, fecal samples, urine, oral fluids and more.

This product has been designed with research scientists, veterinarians, doctors, and technicians in mind for ease of use, reliability, and ruggedness.

Each Dri•Bank Mailer™ sold comes assembled with three main components. These are the Bottom Half that contains 24 wells for preserving liquid aliquots with attached slide closure. The Top Half, which comprises of the closed-foam sealing gasket, hydrophobic membrane, and desiccant. Lastly, the hinge pins that slide into and out of the hinge units for easy disassembly for cleaning.

OPERATIONS

Initialization

For first-time use, the Mailer comes ready to use. Note the Color Scale (Figure 1) to compare the desiccant color in the top-half, it should appear as a dark blue color. When the moisture adsorption capacity has been exhausted, the color will change to beige or a very light tan.

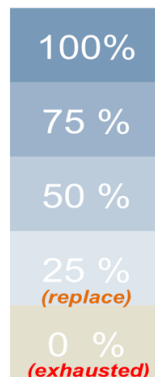


Figure 1: Color Scale

The color on the scale shows the approximate lifespan left, i.e. 100% (dark blue, fully functioning) to 0% (light beige, exhausted). Check to make sure the beads seen through the top-half are predominately dark blue. If most of the beads are very light blue or beige, it may be returned for a replacement. After these steps have been completed, the Dri•Bank Mailer™ is now ready to be used for drying and/or storing samples.

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Use

Referencing Figure 2 below, before opening the Mailer make sure the hinge clip tips (red circles) are pointing upwards (perpendicular) from the hinge assembly. Please note for illustrative purposes the hinge clips are shown PARALLEL to the hinge assembly and should therefore be rotated 90° towards the top-half of the Mailer to be perpendicular.

With thumb and forefinger of one hand applying light pressure to the top- and bottom-half of the Mailer by the slide closure (purple circle marked “1”), move slide closure (green square) toward (“2”) the locking port (blue arrow), and open (“3”). With bottom-half now accessible, samples may be placed individually into respective wells.

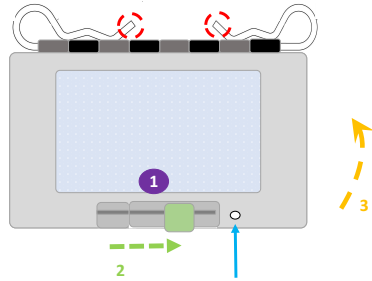


Figure 2. View of top-half for opening Mailer unit

To close the Mailer, refer to Figure 3 below. Briefly, rotate top-half until seated on top of bottom-half of Mailer (“1”). With thumb and forefinger of one hand applying light pressure to the top- and bottom-half of the Mailer by the slide closure (purple circle marked “2”), move slide closure (green square) away (“3”) from locking port (blue arrow). The mailer is now closed and sealed.

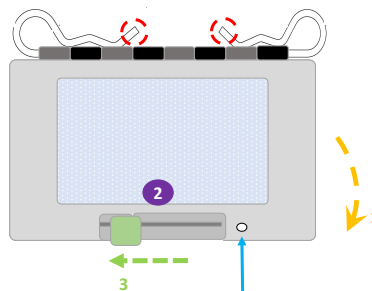


Figure 3. View of top-half for closing Mailer unit

HELPFUL TIPS:

Due to variables such as sample type (liquid or solid) and quantity, as well as environmental conditions and locations, it is recommended to initially test sample drying times to maximize use and determine ideal drying time for your specimens. This is especially critical for high-density preservation (all 24-wells). When evaluating, be sure to record start time and end time for sample drying along with type, size, and quantity as well as confirm biomarker integrity per end user protocol(s).

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Below is a table indicating approximate drying times for different sample types.

Table 1. Estimated Drying Times

Type	Size	Quantity	Est. Time (hours)
Aliquot	10 µL	24*	8 – 12
Biopsy	5 mm ³	3	12 – 24
Fecal	<100 mg	24	12 – 24

Times based on customer information and from peer-reviewed scientific publications using the larger Dri•Bank® System.^{1,2,3} Unless otherwise noted, preservation conditions were at approximately 20°C, 1 ATM, and 30% relative humidity and aliquots refers to aqueous samples. Times required for your sample may vary up or down depending on sample type, quantity, and environmental conditions among other variables. * - based on aqueous aliquot. Other liquid samples such as whole blood, blood products, urine, or oral fluids may take longer.

Please note that several factors can augment the drying process, which can impact drying times. These include the following:

- 1.) volume: greater than 10 µL can slow down the process (i.e., > surface to volume ratio)
- 2.) additives: > 20% v/v alcohols (methanol, ethanol, and propanol) can accelerate evaporation while viscous compounds like glycerol, gels, or detergents can slow it down or prevent complete desiccation entirely
- 3.) membranes: such as those used for microtiter plates can slow drying times by a factor of 2 - 3
- 4.) population: a combination of volume and high quantity (or vice versa), for example 10 µL aliquots within 24-wells, in combination with the above factors can also contribute to slower drying times

For these reasons, we recommend that you initially test the Dri•Bank Mailer™ to maximize your workflow.

Mailer Desiccant Regeneration

Your Dri•Bank Mailer™ has been designed to operate with little to no loss of mechanical integrity or performance for up to five (5) regeneration cycles of its desiccant. The top-half can be dried in a conventional glassware-drying oven, or similar (**DO NOT** use an autoclave, expose to open flame, set on heating element, or similar). The top-half can be effectively dried within a few hours at 50°C, or overnight. **NEVER** expose the Mailer to temperatures exceeding 60°C. These higher temperatures can adversely affect the bonding agent holding the membrane to the Mailer top-half.

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MAINTENANCE

The moisture content of the sample(s) as well as the environment of the operating conditions will determine the frequency of visually checking the Mailer desiccant. Be sure to use the color scale (Figure 1) provided as a helpful guide.

Cleaning

The Mailer has been designed to be reused several times. In between uses, or when the Mailer is dirty and/or contaminated, the following procedures are recommended for cleaning and disinfecting:

1. Disassemble the Mailer into three separate components consisting of the top-half, bottom-half, and the slide closure.
 - a. Referring to Figure 4, first with thumb and forefinger of one hand applying light pressure to the top- and bottom-half of the Mailer by the hinge assembly (purple circle marked “1”), grasp the rounded portion of hinge clip and pull straight out (“2”).
 - b. Next, move slide closure toward (“3”) locking port (blue arrow). The two halves may now be separated.
 - c. Lastly, move slide closure toward gap and off of the slide track (“4”).

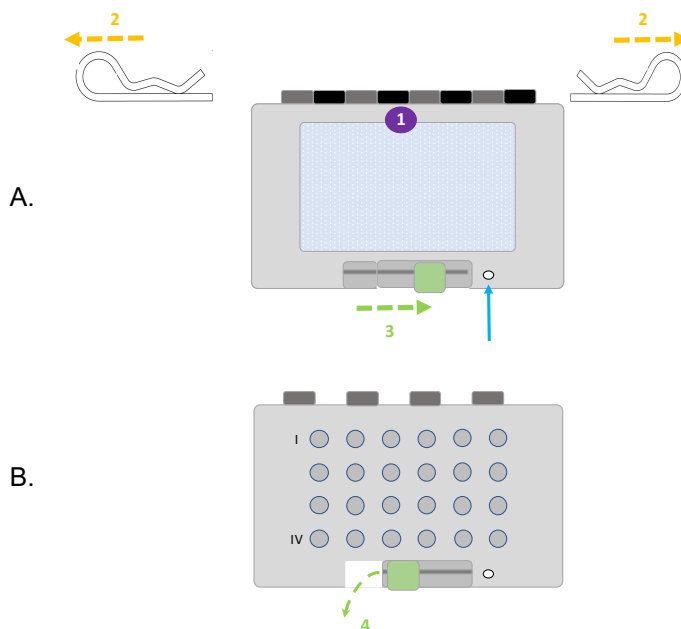


Figure 4. Disassembly of Mailer. (A) View of top-half illustrating steps to separate top- and bottom-half. (B) View of bottom-half illustrating steps to remove slide closure.

2. With the Mailer now disassembled, the bottom-half, slide closure, and hinge clips can be washed with traditional laboratory glassware washing detergent. Once washed and rinsed, these components can be disinfected with either 10% sodium hypochlorite solution (bleach, unscented) or 70% isopropyl alcohol solution and dried (with or without drying oven).
3. Regarding the top-half, use extra care when washing, rinsing and drying as the membrane is delicate; take care not to puncture it with bottle brushes, bristles, or similar items. It is recommended to wash the membrane area lightly with sponge or similar. This area can be disinfected with either 10% sodium hypochlorite solution (bleach, unscented) or 70% isopropyl alcohol solution and dried in drying oven. To regenerate cartridge, see Mailer Regeneration section on previous page.

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4. Once ready for use, the Dri•Bank Mailer™ can be re-assembled via the following steps as illustrated in Figure 5.
 - a. Place slide closure onto the bottom-half slide track (“1”) and move toward locking port (blue arrow).
 - b. Install the top-half onto the top of the bottom-half ensuring both halves are well seated.
 - c. Next, with thumb and forefinger of one hand applying light pressure to the top- and bottom-half of the Mailer by the hinge assembly (purple circle marked “2”), grasp the rounded portion of hinge clip and push straight into the hinge assembly (“3”). NOTE: the hinge clip tip should be pointed upwards. If the hinge clip does not slide easily into place pull out and press slightly harder on region “2” and re-try. Repeat for second hinge clip and check to make sure the Mailer can now open and close with ease.
 - d. Lastly, move slide closure away from locking port into locked/closed position (“4”).

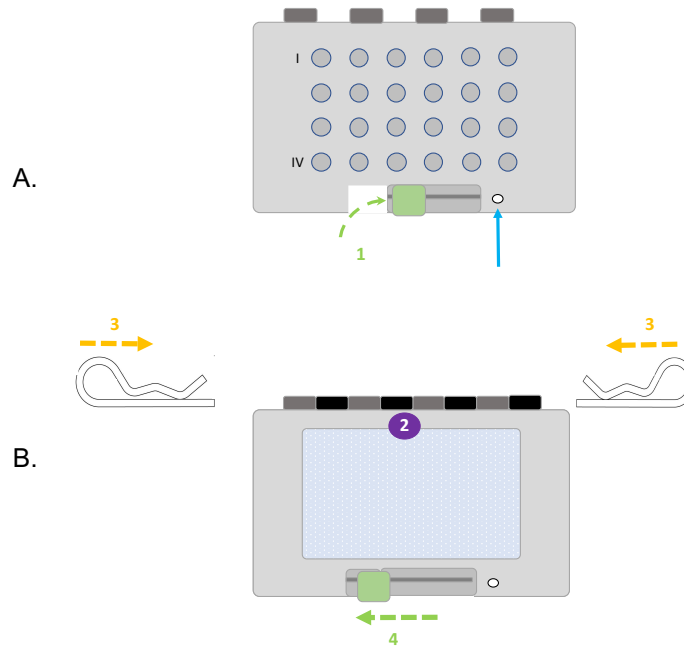


Figure 5. Assembly of Mailer. (A) View of bottom-half illustrating steps to install slide closure. (B) View of top-half illustrating steps to joining top- and bottom-half.

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TROUBLESHOOTING

Does Not Close

Verify nothing is obstructing halves from closing properly and ensure the gasket is not buckling or deformed (NOTE: this includes that the gasket does not exceed a thickness of 1.6mm (~1/16”).

Slide Closure Does Not Lock Into Place

Check to make sure there are no obstructions in or on the slide track to prevent the slide closure from moving.

Molecular Signal Lost

Prior to shipping and/or storing sample(s), it is recommended to perform pilot runs as mentioned above to ensure both the specimen and biomolecules of interest are compatible with the Mailer system or refer to our online database for a list of tissues and biomolecules currently known to be compatible with our storage system (*not available at this time*). If it is known that your tissue and/or biomolecule(s) of interest is compatible, check the seals of the box by holding it up to the light. Any seal malfunction can easily be identified as evidenced by light passing through the box where it should not. Verify there is nothing obstructing the gasket to prevent a proper seal and try again. If problem persists, contact DriBank Labs for technical support.

SPECIFICATIONS

Environmental

Mailer storage temperature: -80 °C to +50 °C

Mailer operating temperature: -80 °C to +50 °C

Mailer storage humidity: 0 to 100%RH

Dimensions

Container: 6.9 cm x 6.9 cm x 1.91 cm

Bottom-Half: 6.9 cm x 6.9 cm x 0.64

Top-Half: 6.9 cm x 6.9 cm x 1.26

Weight

Container: 200g

Not Required

Power

Refrigeration

Fixatives

Matrices

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References

- 1 - Johnson PJ, Hargreaves LL, Zobrist CN, et al. Utility of a portable desiccant system for preservation of fecal samples for downstream 16S rRNA amplicon sequencing. *Journal of Microbiological Methods*. 146: 1 – 6. 2018. doi.org/10.1016/j.mimet.2018.01.007
- 2 – Sadler TR and Khodavirdi AC. High-quality RNA Extracted From Biopsied Samples Dehydrated and Stored Dried at Room temperature Without Chemical Preservation for up to 3 Months as Evidenced by RT-PCR Results. *Appl Immunohistochem Mol Morphol*. 23(6): 456 – 461. 2015
- 3 – Sadler TR, Khodavirdi AC, Hinton DR, et al. Snap-Frozen Brain Tissue Sections Stored With Desiccant at Ambient Laboratory Conditions Without Chemical Fixation are Resistant to Degradation for a Minimum of 6 Months. *Appl Immunohistochem Mol Morphol*. 17(2): 165- 171. 2009

U.S. Patent #9,044,007 and other patents pending.

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