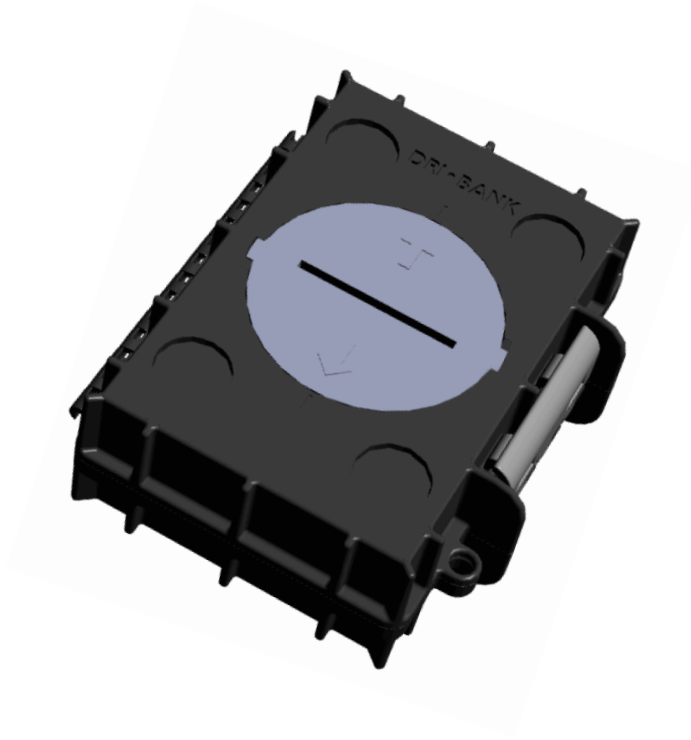


DriBank Labs



The Dri•Bank® System

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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

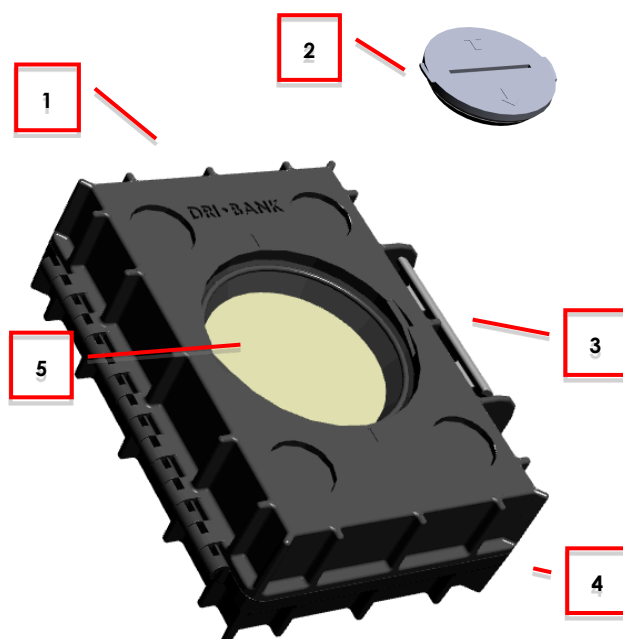
info@dribanklabs.com

+1 844 599 1472

www.dribanklabs.com

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INSIDE THE BOX



- 1 – The Dri•Bank® Container
- 2 – Atacama® or Atacama-C™ Cartridge
- 3 – Container Latch
- 4 – Locking Port *(not shown)*
- 5 – Membrane
- 6 – Microscope Slide Retaining Cushion *(not shown)*
- 7 – Silicone Rubber Mat *(not shown)*
- 8 – Cartridge Color Scale *(not shown)*
- 9 – Closed Foam Gasket *(not shown)*
- 10 – Sachet Silicone Grease *(not shown)*

• Optional Accessories •

- Tube Holder** Designed to fit inside the Dri•Bank to hold microcentrifuge tubes
- Atacama-Cap™** For temporary storage of an individual Atacama® cartridge
- Atacama Torq™ Tool** Conveniently install or remove Atacama® cartridge from the Dri•Bank

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INTRODUCTION

The Dri•Bank® and Dri•Bank-m™ system is a specially designed patented product that can preserve, store or ship a variety of biological specimens in different media at room temperature, including one standard, skirted microtiter plate (Dri•Bank-m™ system only). The Dri•Bank does not require toxic chemical fixatives, matrices, coatings, or electrical power to function. Rather, it utilizes powerful desiccants to dry samples within a static 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, the Dri•Bank 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® system sold comes with its own pair of Atacama® cartridges to be installed and replaced when necessary. The specially designed Atacama-C™ cartridge is sold separately, which functions as the normal Atacama cartridge with the added bonus of also adsorbing CO₂ and volatile organic compounds (VOCs).

The units have been designed so they are stackable for up to 5 units.

OPERATIONS

Initialization

For first-time use, remove the container (Dri•Bank or Dri•Bank-m) and cartridge (Atacama® or Atacama-c™) from their respective packaging. Note, the Cartridge Color Scale (Figure 1) is provided on the back of the information card.

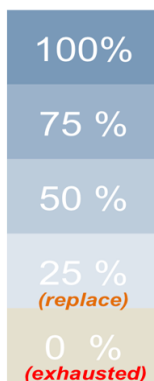


Figure 1: Cartridge Color Scale

The color on the scale shows the approximate lifespan left for the cartridge, i.e. 100% (dark blue, fully functioning) to 0% (light beige, exhausted). Check to make sure the beads seen through the cartridge are predominately dark blue. If most of the beads are very light blue or beige, it may be returned for a replacement. With the container closed, insert the cartridge into the opening on the top of the container and twist the cartridge until seated with the arrow as close to the alignment marks “|” as possible. Check to make sure the cartridge is level with the container and there is no buckling, as this would prevent a hermetic seal. After all these steps have been completed, the container is now ready to be used for drying and/or storing samples in multiple formats.

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Use

To open a closed container, push down on the front snap closure. This will cause the container to “pop” open slightly. To close, simply reverse the steps and allow the latch to “snap” over the front clasps. When this happens, the box is closed and sealed. A good tight seal occurs when the box is closed smoothly and easily with no buckling or visible gaps.

If drying and storing standard microscope slides (75 mm × 25 mm × 1 mm), insert and remove as normally done with conventional microscope slide boxes. To minimize cross-contamination potential, ensure sections on adjacent slides are not facing each other.

If drying and storing samples in microcentrifuge tubes (i.e., “Eppendorf” or “PCR” tubes), install optional tube holder insert. The Tube Holder, depending on manufacturer, can store up to twenty-four 0.5 mL (“PCR”) tubes, or six 2.0 mL non-footed/non-high-capped tubes along the outside left- and right-hand side edge of the tube holder. If storing 2.0 mL tubes, it is recommended to remove the cushions from top-half of Dri•Bank by pulling it them away and storing in a clean plastic bag until ready to be re-installed.

For drying and storing biopsy or fecal core specimens, a 35 mm disposable plastic Petri dish (a total of 3 can be placed in the container) is recommended. Place the specimen into the Petri dish then place the Petri dish into the DriBank. Drying times vary depending on sample type and size (see Table 1). Once dried, the samples can be placed into microcentrifuge tubes for more convenient storage.

If drying and storing samples in a standard skirted microtiter plate (*Dri•Bank-m only*), please note special instructions below:

- 1.) Open Dri•Bank-m *with cartridge already mounted* and remove gasket, if installed. Insert microtiter plate with samples to be dry-preserved into lower half (figure below)
- 2.) Install gasket OVER microtiter plate and ensure gasket fits along the outer edge of the plate. Be sure to remove plastic cover of microtiter plate, if used, prior to closing Dri•Bank.
- 3.) Close Dri•Bank and snap latch into place.

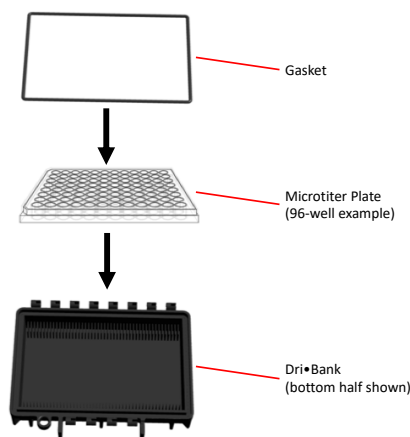


Figure 2: Sequence for microtiter plate

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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 time to maximize use and determine ideal drying time for your specimens. This is especially critical for high-density preservation (96-well or greater). 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 user protocol(s).

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

Table 1. Drying Time Examples

Type	Size	Quantity	Est. Time (hours)
Aliquot	10 μ L	96*	8 – 12
Biopsy	5 mm ³	3	12 – 24
Tissue Section	10 μ m	135**	4 – 12
Fecal	500 mg	4	12 – 24

Times based on customer information and from peer-reviewed scientific publications.^{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. * - use of flat-bottom standard, skirted microtiter plate. ** - three sections per standard 25 mm x 75 mm x 1 mm glass microscope slide.

While numerous liquid samples, up to 175 μ L each, including RNA aliquots have been dried and preserved successfully for months at room temperature, the process can be altered by several factors that impact drying times. These include the following:

- 1.) container geometry: flat- or round-bottomed are preferred over conical at volumes great than 20 μ L (i.e., > surface to volume ratio)
- 2.) additives: > 20% v/v alcohols (methanol, ethanol, and propanol) can accelerate evaporation while viscous compounds like glycerol 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 30 μ L aliquots in a 384-well plate, in combination with the above factors can also contribute to slower drying times

For more solid samples such as biopsy specimens or fecal material, ensure there is adequate air space between the sample and storage media walls (Petri dish, microcentrifuge tubes, microtiter plates, etc.). If samples impinge upon walls regardless, try to keep sample height no greater than 30% diameter of specimen. Tissue sections up to 20 μ m can be dried within minutes in the Dri•Bank depending on quantity. Recall, the Dri•Bank is designed to effectively preserve individually small specimens (< 5 mm, 50 μ L, or 500 mg).

For these reasons, we recommend that you initially test the DriBank to maximize your workflow and share your experience with our team to add to our product knowledge base.

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Atacama Cartridge Regeneration

Your pair of cartridges (Atacama® or Atacama-C™) have been designed to operate with little to no loss of mechanical integrity or performance for up to five (5) heat regeneration cycles. The cartridge 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). Cartridges can be effectively dried within a few hours at 100°C or overnight at 70°C. DO NOT expose the cartridges to temperatures exceeding 110°C.

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 Atacama cartridge. Be sure to use the color scale provided as a helpful guide.

If the Dri•Bank is used daily, it is recommended to note the color of the cartridge beads at the end of each workday. When more than half (> 50%) of the beads have changed to a very light blue color your cartridge may continue to function for only 12 hours or up to another week, depending on use and sample type.

If used less frequently (a few times a week or month), the cartridge may not require changing for several weeks or months.

Cleaning

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

1. With gloved hands, removed the cartridge and, if still viable, insert into Atacama Cap™ (*optional accessory*) or place into sealable plastic bag for temporary storage. If expired, you may regenerate as mentioned previously. If all regeneration cycles have been completed, it should be disposed.
2. Remove gasket from lower half of container carefully using paperclip, or similar item, and set aside. If dirty, clean, disinfect, and dry separately. Be careful not to damage the gasket as it can be torn easily. If damaged, contact DriBank Labs for replacement.
3. Wash the Dri•Bank® container in a mild detergent solution, rinse with distilled water and air-dry with the interior facing down. **NOTE:** the membrane is delicate; take care not to puncture it with bottle brushes, bristles, or similar items.
4. To disinfect the Dri•Bank, spray with either a 10% sodium hypochlorite solution (bleach, unscented) or 70% isopropyl alcohol solution and air-dry with the interior facing down.
5. Once dried, close container and insert either new Atacama® cartridge or re-install stored cartridge.

TROUBLESHOOTING

Does Not Close

Verify sample containers are properly seated and not too large for container.

Check to make sure the container gasket is seated properly around groove along the outer perimeter of the bottom half of container and it is not bulging or twisted anywhere. If improperly seated, apply light pressure to move gasket back into slot and adjust accordingly. Close normally.

Cartridge Does Not Lock Into Place

Check to make sure that the O-ring is properly seated in the cartridge groove. If not, apply light pressure to re-seat O-ring into groove. Make sure there are no obstructions and apply firm, even pressure while twisting to install the cartridge. If necessary, apply a light coating of silicone grease provided along the inner wall of cartridge receptacle.

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Molecular Signal Lost

Prior to 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 Dri•Bank® 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

Container storage temperature: -80 °C to 80 °C

Container operating temperature: -80 °C to 80 °C

Container storage humidity: 0 to 100%RH

Atacama® cartridge operating humidity: 0 to 100%RH

Atacama-C™ cartridge operating humidity: 0 to 100%RH

Dimensions

Container: 9cm x 14cm x 5cm

Atacama® Cartridge: 6.5cm x 1.3cm

Atacama-C™ Cartridge: 6.5cm x 1.3cm

Weight

Container: 200g

Atacama® Cartridge: 50g

Atacama-C™ Cartridge: 50g

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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