

Tubes

Storage in the Hamilton BiOS is the ultimate investment in the integrity and long-term stability of a sample. The tube type for long-term has far-reaching implications related to the integrity and stability of the sample. The financial investment of a researcher in participant recruitment, sample collection and processing is significant. Therefore, special care is warranted when choosing a storage tube and storage system to ensure that tubes do not crack during long-term storage, that the tube materials do not leach into the sample over time and that tubes do not burst or crack when transported to collaborators. The integrity of all samples stored in the BiOS is of the utmost importance, as is preserving the integrity of the BiOS itself. For sample and BiOS safety reasons, only compatible and pre-approved tube types will be stored in the BiOS.

These are as follows:

1. FluidX 96-Format, 0.26ml External Thread, Next-Gen Jacket, Dual-Coded Tube
2. FluidX 96-Format, 0.5ml External Thread, Next-Gen Jacket, Tri-Coded Tube
3. FluidX 96-Format, 1.0ml External Thread, Next-Gen Jacket, Tri-Coded Tube



The Unit aims to support scientists by providing a seamless and reliable sample storage and processing service that will ultimately aid them in contributing to medical advancements.

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BIOMEDICAL RESEARCH INSTITUTE

Biorepository Unit



GUARANTEED SAMPLE:

- INTEGRITY
- SECURITY; AND
- TRACEABILITY

ABOUT THE BIOREPOSITORY UNIT

The Biorepository Unit is a new, state-of-the-art facility which forms a part of the Biomedical Research Institute (BMRI). The Unit will provide researchers with a secure and cost-effective alternative to long-term sample storage by using the latest in cutting-edge storage technology – the Hamilton BiOS L5 (BiOS). The Unit will also provide sample processing and preparation for storage services with the sophisticated Hamilton easy Blood STAR.

This Hamilton BiOS L5 is the first fully automated Biorepository system in the Southern Hemisphere. The system's capacity makes provision for 3.5 million samples which is the equivalent of a few hundred conventional ultra-low temperature freezers. The BiOS will allow efficient and quick sample retrieval, even from multiple storage boxes.

The facility is equipped with several backups, including two refrigeration systems, and in the event of a power failure, a backup generator and a bulk liquid nitrogen tank which allows for vapour phase storage of samples should the generator fail. The BiOS is monitored around the clock with alarms and alerts sent directly to Biorepository staff and technical support team, in real-time for immediate action. The Biorepository Unit will be compliant with ISO 20387:2018 and ISBER guidelines and will function in accordance with all ethical and regulatory requirements.

THE SERVICE OFFERING

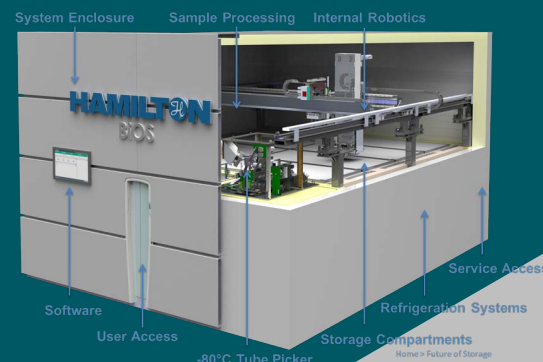
Storage

Storage in the BiOS offers a number of features, which makes it far superior to conventional ultra-low temperature (ULT) freezers. These include the following:

1. Automated sample management workflows;
2. Sample integrity and temperature control at -80°C ;
3. Traceability – full audit trail and temperature log;
4. Sample security – stringent access control; and
5. Backups – built-in redundancies.

An investment in BiOS storage will ultimately save you:

1. Space, by eliminating the need to accommodate hundreds of conventional ULT freezers;
2. Money, by reducing energy costs and eliminating costs associated with purchasing, maintaining and insuring freezers; and
3. Time, by eliminating hours spent manually searching through conventional freezers for samples, sample storage errors, and the need to be onsite after hours due to freezer failure or malfunction.



Sample Processing and Preparation for Storage

The Biorepository Unit has a sophisticated automated robotic workstation which will offer the following services to clients:

1. Isolation of DNA from whole blood;
2. Isolation of RNA from PAXgene or Tempus tubes;
3. Aspiration of blood fractions (i.e. plasma, serum, buffy coat and remaining red blood cell component) from centrifuged blood collection tubes into FluidX tubes; and
4. Reformatting of thawed samples from current BiOS incompatible storage tubes into the compatible FluidX tubes.

