Bluechiip® Stream™ Web Application V4.0

bluechiip
TRACKING SOLUTIONS

PRODUCT NAME
Stream™ V4.0

GENERAL DESCRIPTION

Bluechiip® offers a passive chain-of-custody and identification solution for wireless tracking and management of cryogenic storage equipment such as samples, cassettes, racks, freezers and tanks in biobanks. Stream™ V4.0 is a web-based sample management and temperature chain-of-custody application for biospecimens stored in cryogenic and cold chain environments such as biological resource centers, biorepositories, biobanks, life science laboratories and biostorage facilities.

Stream™ is designed to track the storage and retrieval of samples, their respective custodian, location and sample temperature data. Stream™ is capable of handling basic inventory tasks and reporting inventory.

Stream™ is a web-based program that interacts with a graphical user interface on the Matchbox reader and has been design to be used out-of-the-box, without any server installation so you can get started straight away. Stream™ can be configured with multiple readers connected to an SQL server.

Stream™ V4.0 features offers:

- Temperature chain-of-custody and sample inventory management
- Intuitive, efficient scientific management of cryogenically stored biospecimens and biological materials
- Sample chain-of-custody is maintained via the Bluechiip custody log throughout the sample management process

MAIN FEATURES AND PERFORMANCE

Administration and Interface

1. Simple and administrative interface.
2. Customisation options for establishing storage system hierarchy structure.
3. Flexible categorical organisation of samples by type, customer and project.
4. Manage Biobanks, Projects and storage container types, including container nesting.

WHAT ARE THE ADVANTAGES OF DIGITAL RETRIEVAL?

Accountability is the key to professional delivery in biobanking practice with digital recovery and archive records essential in modern practice. Current methods can't offer a digital tracking solution for the growing number of high value and irreplaceable samples.

Bluechiip provides:

- Surety of knowing that it is what it is.
- Maintenance of integrity and quality of samples.
- Read sample data while stored within low temperatures and reduce sample handling and thermal excursions.

HOW YOU WILL FIND BLUECHIIP TRACKING SOLUTIONS VALUABLE?

Throughout the protocols and quality assurance processes of biobanking there are requirements with professional responsibilities and risk management. The Bluechiip® totally integrated tracking solution increases system efficiencies and minimises risk - specifically all adding value along the way as these examples demonstrate:

- single tag tracking of both ID and temperature (including ID of sample handler)

- cost-effective solution that enhances scientific productivity

- track samples with sample data linked to a bluechiip ID (and barcode) via the Stream™ software

- active management of your storage facility to maximize space

- generate reports on operational components of the biobank

- select and investigate specific samples for operational or quality concerns

- meet KPIs in sample auditing, retrieval and storage

- improve operator health and safety (OH&S).

Sample Data and Search

1. Powerful search capabilities to instantly locate and manage specific individual samples, projects and tasks

2. Samples individually or through projects can be allocated tags to make searching easier and faster.

3. Sample annotation can be entered at the sample level or project level and is searchable.

4. For each storage container, whether it is a tank, rack, cassette or tower, the samples that are stored inside can be reviewed and examined.

Sample Audit and History

1. Complete audit trails for all operations, including historical temperature data from every reading taken with a Bluechiip® Matchbox™ reader, tasks associated with the sample and the custodian at the time of reading.

2. Management and reporting of temperature and thaw cycle history with alerts when thaw temperatures have been exceeded;

3. Export of data:
   a. Ability to export Sample history (custodies with readings) in CSV format
   b. Print pages for either direct printing or PDF conversion.

Sample and Container History

In Stream™ you can associate with each sample the following information:

- Bluechiip® ID and barcode
- Project Name
- Contact Name and Number
- Project Description
- Date added to system
- Location as a generic field
- Tank, rack and cassette location
- Thaw temperature
- Tags – for searching and data association and grouping
- Sample description

For each storage container (tank, rack, tower, cassette), the following information can be associated:

1. Date cryotagged container was added
2. Cryotag ID
3. Container type (tank, rack, cassette, tower)

TYPICAL CONFIGURATIONS AND APPLICATIONS

Stream™ V4.0 can be used on either a Bluechiip® Matchbox™ reader straight out-of-the-box with no installation necessary via an Ethernet cable, the Matchbox™ reader automatically joins your local network and Stream™ is ready to start work. The Matchbox™ reader can be configured to connect to a WiFi access point to allow mobility.

The Stream™ V4 Web API provides access to the Stream™ database. Using the Stream™ API, the Bluechiip® system is flexible in meeting your business tracking and database integration needs. The API is structured using the REST principle, whereby information is encoded in JSON and transferred over HTTP requests (GET, PUT, POST, DELETE) to URLs structured accordingly.

Stream™ requires a computer with at least 1 GB of RAM, a 2GHz processor and 10GB storage.

INCREASED TRANSPARENCY AND ACCOUNTABILITY

- Users are allocated a unique custody key
- Complete sample history is maintained & logged
- Know who, when, where, how many times, and what the sample temperature was at every point in the chain of custody

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