14, September, 2016

Taiyo Nippon Sanso Corporation

Commencement of Sales of CryoLibrary iMaster, an Integrated Temperature History Information Management System for Biological Samples

Taiyo Nippon Sanso Corporation (TNSC; President and CEO: Yujiro Ichihara), in a project commissioned by the Stem Cell Evaluation Technology Research Association, has developed an integrated temperature history information management system for biological samples, and commenced sales of it as a new product.

CryoLibrary iMaster

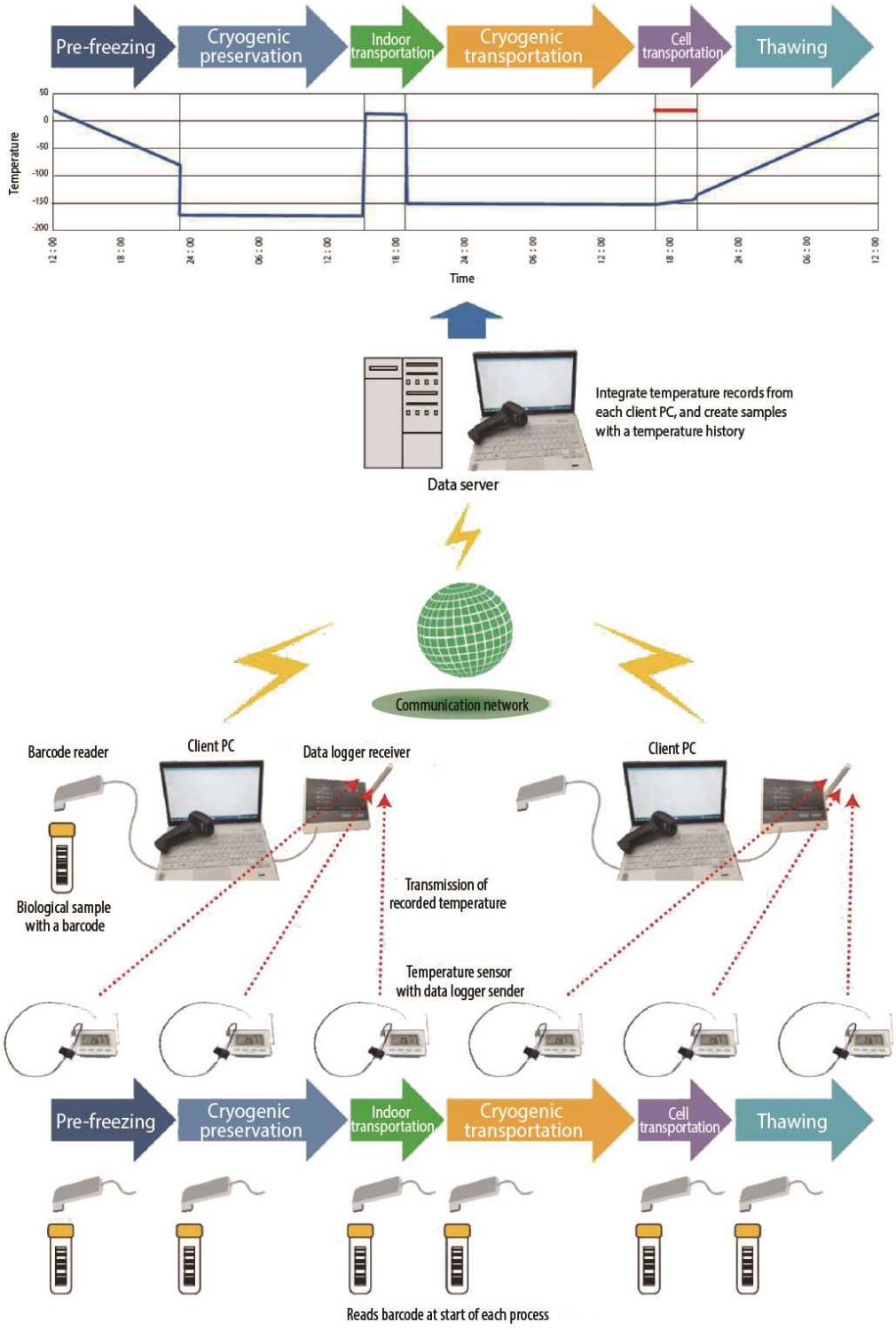
CryoLibrary iMaster (iMaster: integrating management system for temperature records)provides centralization on a server and collective management of multiple and individual temperature data, from dispensing after culture multiplication to freeze thawing.

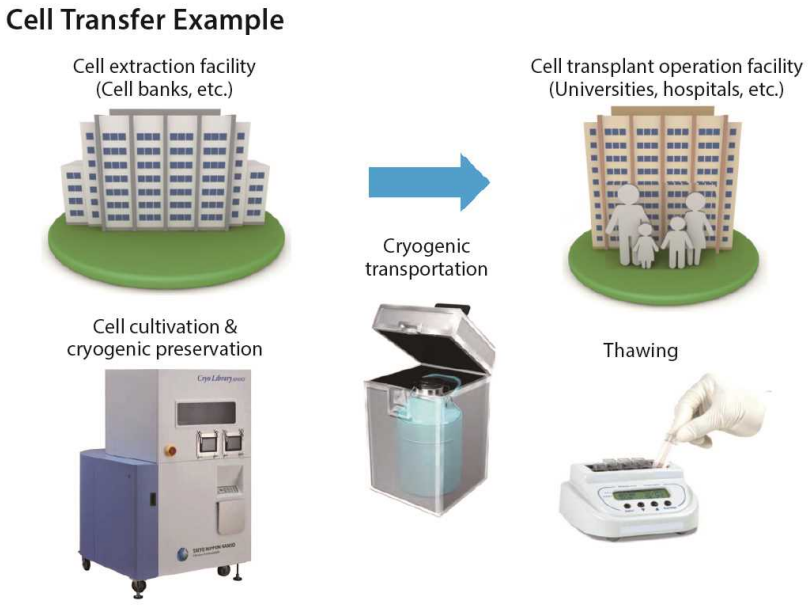
As a result, it is possible to keep records not only of the time of transport between sites, but also the freezing environment, the thawing environment, and the transfer environment within the facility. The system operates under a data network environment that utilizes a data carrier, such as a bar code, and dedicated PC software.

System Main Screen

By means of adding icons to the screen, the process by which the samples are traced can be customized according to preference.

System Flow


Pre-freezing
Cryogenic preservation
Indoor transportation
Cryogenic transportation
Cell transportation
Thawing
Temperature
Time
Integrate temperature records from each client PC, and create samples with a temperature history
Data server
Communication network
Barcode reader
Client PC
Data logger receiver
Client PC
Biological sample with a barcode
Transmission of recorded temperature
Temperature sensor with data logger sender
Pre-freezing
Cryogenic preservation
Indoor transportation
Cryogenic transportation
Cell transportation
Thawing
Reads barcode at start of each process



Operation Example (Temperature History Sheet)

By reading the barcode of the samples at the beginning and end of each process, the temperature history of each sample is aggregated and recorded on a single sheet. The history is saved as OXPS data/OpenXPS data (overwriting the data has been disabled). The data is useful in guaranteeing temperature-related quality assurance and traceability.