

2020-07-29

MISO LIMS Training

Introduction



Agenda

- Introduction
 - MISO LIMS
 - Navigation
 - Entering Data
 - Getting Help
 - Projects
- Samples
- Libraries
- Sequencing

MISO LIMS

- Laboratory Information Management System for next-generation sequencing centres
- Created by Earlham Institute (formerly TGAC)
- Developed by Ontario Institute for Cancer Research since 2015
 - Ongoing – new features still being added
- Track all lab processes from sample receipt to sequencing

MISO LIMS

- Sample receipt and wet lab work
- Library receipt or preparation
- Pooling
- Sequencing
- Quality Control
- Location tracking
 - Barcoding
 - Tube storage
 - Freezers
 - Transfers – receipt, internal, and distribution
- Orders – communicating requirements between teams

Navigating MISO

- Home Page
 - Widgets
 - Navigation Menu
 - Preparation
 - Instrument Runs
 - Tools
 - Misc
 - Institute Defaults
 - ENA
 - User Administration

The screenshot shows the MISO STAGING dashboard. On the left, a sidebar lists 'Preparation' and 'Instrument Runs' sections. Under Preparation, links include Projects, Samples, Libraries, Library Aliquots, Pool Orders, Pools, Worksets, Boxes, and Transfers. Under Instrument Runs, Sequencing Orders (All, Outstanding, In-Progress) and Sequencing (Containers, Runs) are listed, along with Array Scanning (Arrays). The main area is the 'Dashboard', which features a search bar and a search instruction: 'Search barcodable items by name, alias, or barcode. Alternatively, scan a barcode to see any matching items here.' To the right, the 'Instrument Status' section displays four instruments: M00146 (Completed RUN4629, Idle since 2020-07-15), M00753 (Completed RUN4630, Idle since 2020-07-15), NB551051 (Completed RUN4628, Idle since 2020-07-15), and PCT0013 (status unknown). Below the dashboard are 'Workflows' and 'Project' sections.

List Pages

Pools

Illumina Oxford Nanopore PacBio

Illumina

Add Edit Create Orders Print Barcode(s) Download Parents Add QCs Edit QCs Delete Merge

Show 25 entries Search: ?

	Name	Alias	Description	Date Created	Dilutions	Concentrat	
<input type="checkbox"/>	IPO11288	XX POOL 1		2019-03-08	1	3.6 ng/µL	
<input type="checkbox"/>	IPO11289	XX POOL 2		2019-03-08	1	3.6 ng/µL	
<input type="checkbox"/>	IPO11290	XX POOL 3		2019-03-08	1	3.6 ng/µL	
<input type="checkbox"/>	IPO11291	XX POOL 4		2019-03-08	1	3.6 ng/µL	
<input type="checkbox"/>	IPO11292	XX POOL 5		2019-03-08	1	3.6 ng/µL	EMPTY
<input type="checkbox"/>	IPO11296	PR POOL 4		2019-03-08	1	2.472047914 ng/µL	EMPTY
<input type="checkbox"/>	IPO11297	PR POOL 5		2019-03-08	1	2.588348896 ng/µL	EMPTY
<input type="checkbox"/>	IPO11294	PR POOL 2		2019-03-08	1	3.347579009 ng/µL	EMPTY

Search syntax:
is:fulfilled
is:active
created:DATE
changed:DATE
creator:USER
changedby:USER
platform:PLATFORM
index:NAME
index:SEQ
box:NAME

Working with Tables

- Bulk entry in MISO is done using a table interface similar to Excel and other spreadsheet software
- Tables have import and export features
 - Can work in spreadsheet software outside of MISO
- In some cases, the bulk table does not include all information
 - Check the individual item page

Bulk Pages

[Save](#)

[Quick Help](#)

Create Libraries														
Fill Boxes by Row		Fill Boxes by Column		Check QCs		Sort	Import	Export						
	Name	Alias	Sample Type	Project	Subproject	Sci. Name	External Name	Identity Alias	Donor Sex	Consent	Sample Class	Tissue Origin	Tissue Type	
1			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
2			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
3			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
4			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
5			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
6			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
7			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
8			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
9			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
10			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
11			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			
12			GENOMIC ▼	DEMO ▼	▼	Homo sapiens ▼		▼ Unknown ▼	This Project ▼	gDNA (aliquot)	▼			

Edit Pages

Edit Sample

Save

Home > DEMO

< Previous Sample SAM268249

Quick Help 

Sample Information

Sample ID:	268250
Project:*	DEMO 
Name:	SAM268250
Alias:*	DEMO_0001_Pa_P_nn_1-1_D_S1
Description:	
Matrix Barcode:	
Date of Receipt:	YYYY-MM-DD
Requisition ID:	
Scientific Name:*	Homo sapiens 
Sample Type:*	GENOMIC 
QC Status:	Ready 
QC Status Note:	
Discarded:	<input type="checkbox"/>

Edit Pages (Continued)

Transfers

ID	Items	Sender	Recipient	Transfer Time	Received	QC Passed	Last Modified
5359	1	BioBank (University Health Network)	Unspecified (Internal)	2020-07-27	1/1 (0 pending)	1/1 (0 pending)	2020-07-27 09:12:13

Showing 1 to 1 of 1 entries

Relationships

Name	Alias	Tissue Origin	Tissue Type	Sample Class	QC	Location	Creation Date	Last Modified
SAM268249	DEMO_0001_Pa_P_nn_1-1	n/a	n/a	Tissue	?	Unknown	2020-07-27 09:12:12	2020-07-27 09:12:12
SAM268248	DEMO_0001	n/a	n/a	Identity	?	Unknown	2020-07-27 09:12:11	2020-07-27 09:12:11

Showing 1 to 2 of 2 entries

Changes

Name	Summary	Time
admin	barcode: n/a → 11223344, volume: n/a → 42, volume units: n/a → MICROLITRES	2020-07-27 09:19:13
admin	Sample created.	2020-07-27 09:12:11

Showing 1 to 2 of 2 entries

Working with Boxes

- Samples, libraries, library aliquots, and pools can be stored in barcoded tubes
- These tubes are stored in boxes
- Boxes are usually stored in freezers
- Boxes may also represent plates which do not have a barcode for each well
- The Box Contents diagram in MISO allows you to select and work with one or many box positions to choose or modify what is stored in the box
- The VisionMate scanner can be used to scan all of the tubes at once to quickly fill a box in MISO



Edit Box Page

Contents Options ▾

Hold down Ctrl (Windows, Linux) or Command (Mac) to select multiple positions. Click a row or column header to select the entire row or column.

	01	02	03	04	05	06	07	08	09	10	11	12
A												
B												
C												
D												
E												
F												
G												
H												
<input type="button" value="Select All"/> <input type="button" value="Select Odd Columns"/> <input type="button" value="Select Even Columns"/>												

Position Search

B01	<input type="text" value=" "/>
B02	<input type="text" value=""/>
B03	<input type="text" value=""/>
B04	<input type="text" value=""/>
B05	<input type="text" value=""/>
B06	<input type="text" value=""/>
B07	<input type="text" value=""/>
B08	<input type="text" value=""/>
B09	<input type="text" value=""/>
B10	<input type="text" value=""/>
B11	<input type="text" value=""/>
B12	<input type="text" value=""/>

[Print Barcodes by Position](#) [Edit](#) [Make aliquots](#) [Print Barcode\(s\)](#) [Download](#) [Parents](#) [Children](#) [Add QC](#)s [Edit QC](#)s [Add to Workset](#)

[Attach Files](#) [Transfer](#)

Show 96 entries [List all Box Contents](#)

Position	Element Name	Element Alias
B01	LIB39970	CPTRG_0111_Ov_M_PE_60702_EX
B02	LIB39978	CPTRG_0118_Ov_M_PE_60710_EX

Showing 1 to 2 of 2 entries (filtered from 17 total entries) Last Next 1 Previous First

Getting Help

- Links in Header
 - Help – User Manual
 - Chat – Gitter
 - Report a problem
- Quick Help
- Help Bubbles ?

[Help](#) | [Chat](#) | [Report a problem](#) | Logged in as: **admin** | [Logout](#)

Save

Quick Help ⓘ

Projects

- Represent a sequencing effort toward a particular goal
- Grouping of samples, libraries, sequencer runs, and other related items
- Samples belong to a project. Most other items are related indirectly through samples
 - Libraries and library aliquots belong to the project of the parent sample
 - Pools and runs may contain items from multiple projects
- Edit Project page shows all related items

Exercise

Complete the following tutorials using Chrome or Firefox:

- Tutorial 3: Working with Boxes
- Tutorial 4: Working with Tables
- Tutorial 5: Project Coordination

<https://miso-lims.github.io/walkthroughs/>

Note: These are the OICR walkthroughs. Other labs may have an alternate site.



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