2020-07-29

MISO LIMS Training

Introduction

OICR
Ontario Institute
for Cancer Research

Agenda

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

MISO LIMS

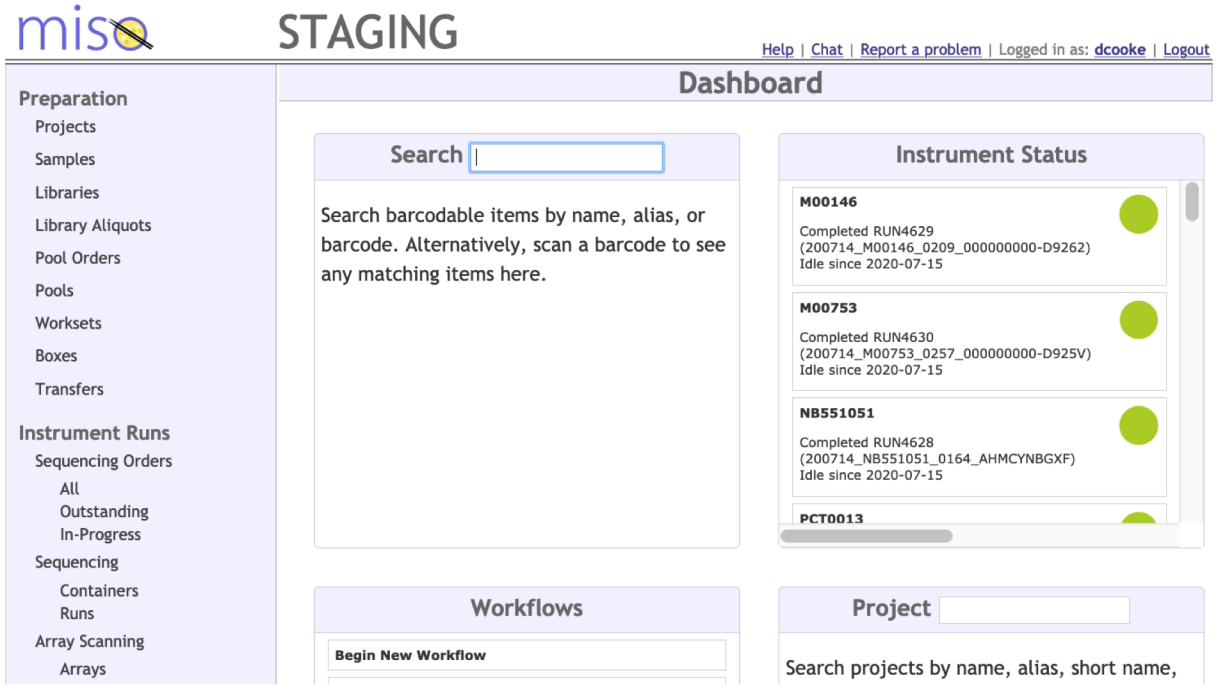
- Laboratory Information Management System for next-generation sequencing centres
- Created by Earlham Institute (formerly TGAC)
- Developed by Ontario Institute for Cancer Research since 2015
  - Ongoing – new features still being added
- Track all lab processes from sample receipt to sequencing

MISO LIMS

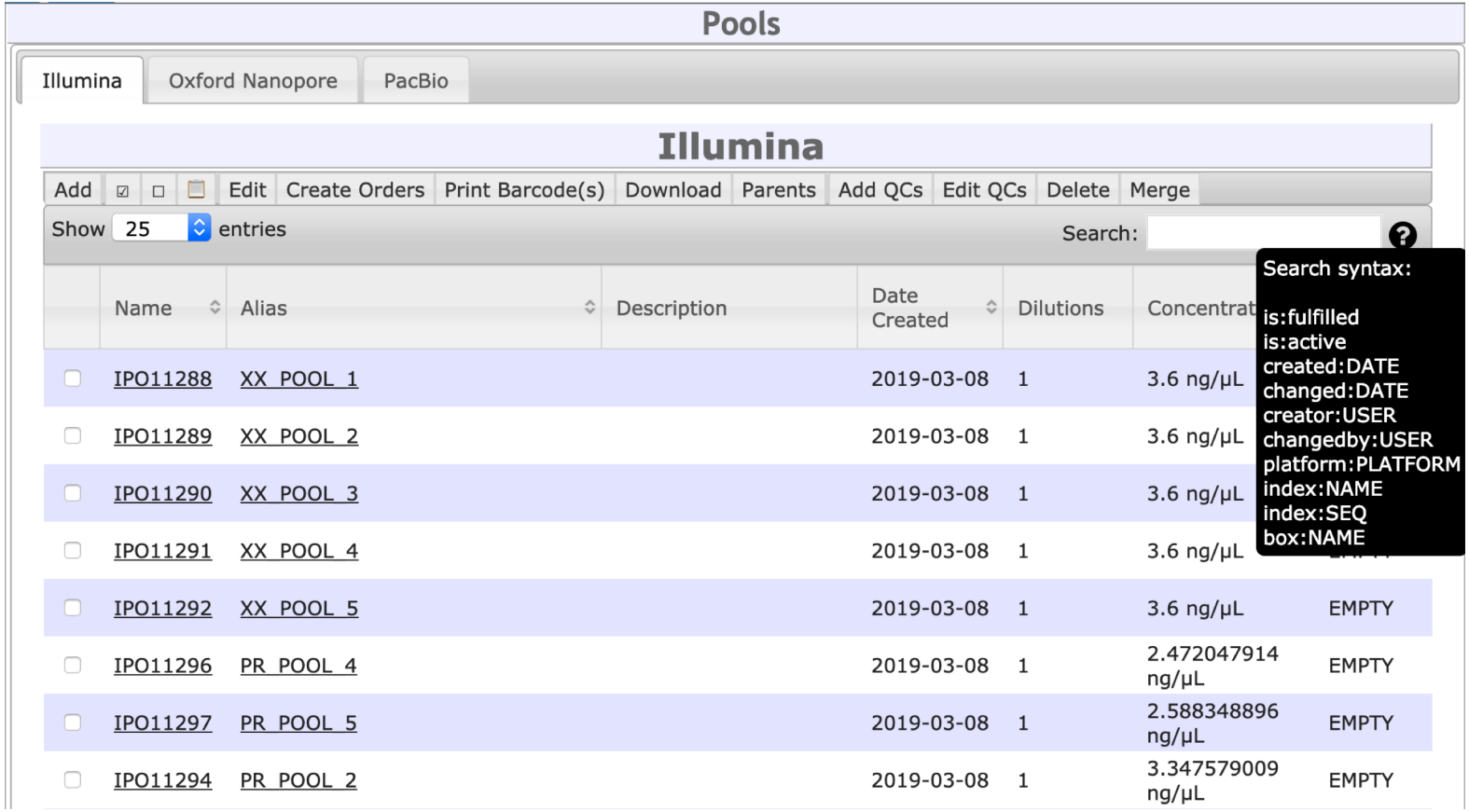
- Sample receipt and wet lab work
- Library receipt or preparation
- Pooling
- Sequencing
- Quality Control
- Location tracking
  - Barcoding
  - Tube storage
  - Freezers
  - Transfers – receipt, internal, and distribution
- Orders – communicating requirements between teams

Navigating MISO

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



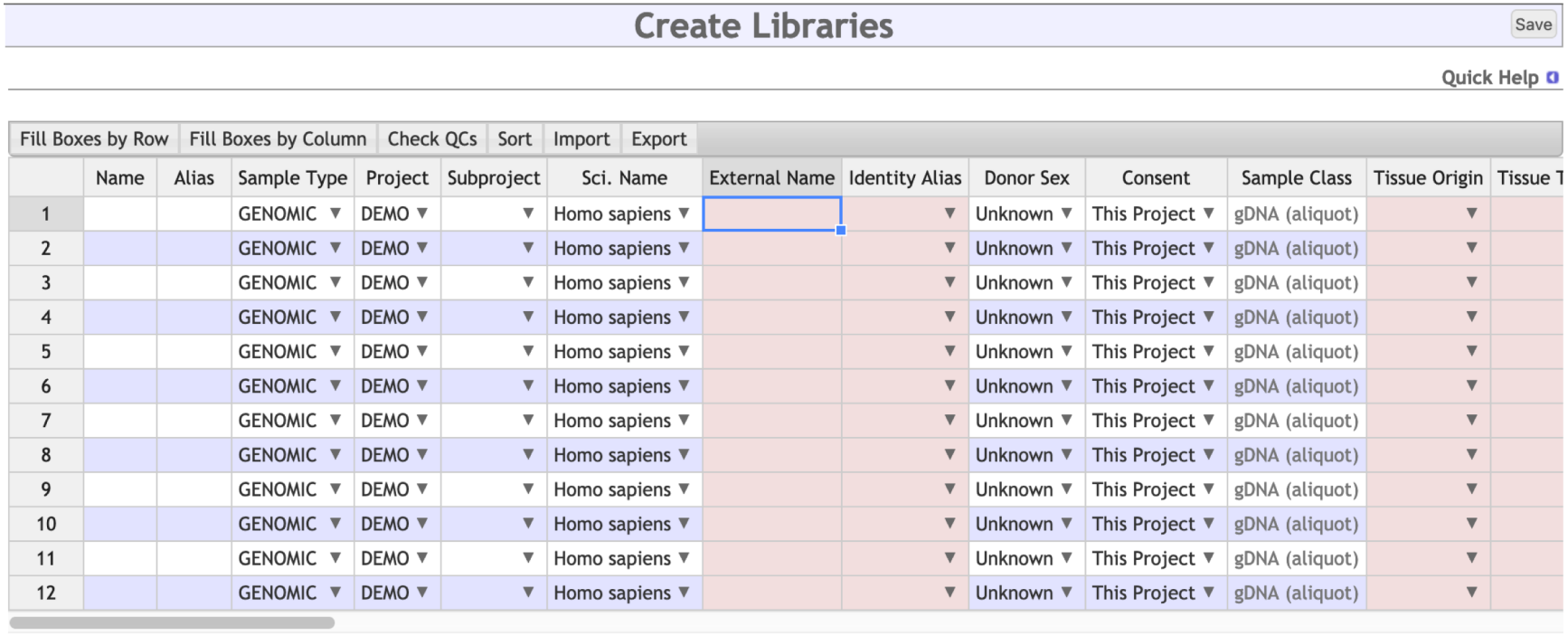
List Pages


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:
Search syntax:
is:fulfilled
is:active
created:DATE
changed:DATE
creator:USER
changedby:USER
platform:PLATFORM
index:NAME
index:SEQ
box:NAME
Name
Alias
Description
Date Created
Dilutions
Concentrat
IPO11288 XX_POOL_1 2019-03-08 1 3.6 ng/µL
IPO11289 XX_POOL_2 2019-03-08 1 3.6 ng/µL
IPO11290 XX_POOL_3 2019-03-08 1 3.6 ng/µL
IPO11291 XX_POOL_4 2019-03-08 1 3.6 ng/µL
IPO11292 XX_POOL_5 2019-03-08 1 3.6 ng/µL EMPTY
IPO11296 PR_POOL_4 2019-03-08 1 2.472047914 ng/µL EMPTY
IPO11297 PR_POOL_5 2019-03-08 1 2.588348896 ng/µL EMPTY
IPO11294 PR_POOL_2 2019-03-08 1 3.347579009 ng/µL EMPTY

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



	Name	Alias	Sample Type	Project	Subproject	Sci. Name	External Name	Identity Alias	Donor Sex	Consent	Sample Class	Tissue Origin	Tissue T
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:	☐

Edit Pages (Continued)

Transfers

Add ☑ ☐ ☑ All Delete

Show 25 entries Search:

	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 First Previous 1 Next Last

Relationships

Create ☑ ☐ ☑ All ☐ Edit Propagate Print Barcode(s) Download Parents Children Add QCs Edit QCs Add to Workset Attach Files Transfer Delete

Show 25 entries Search:

	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
☐	SAM268248	DEMO_0001	n/a	n/a	Identity	?	Unknown		2020-07-27 09:12:11

Showing 1 to 2 of 2 entries First Previous 1 Next Last

Changes

Show 25 entries Search:

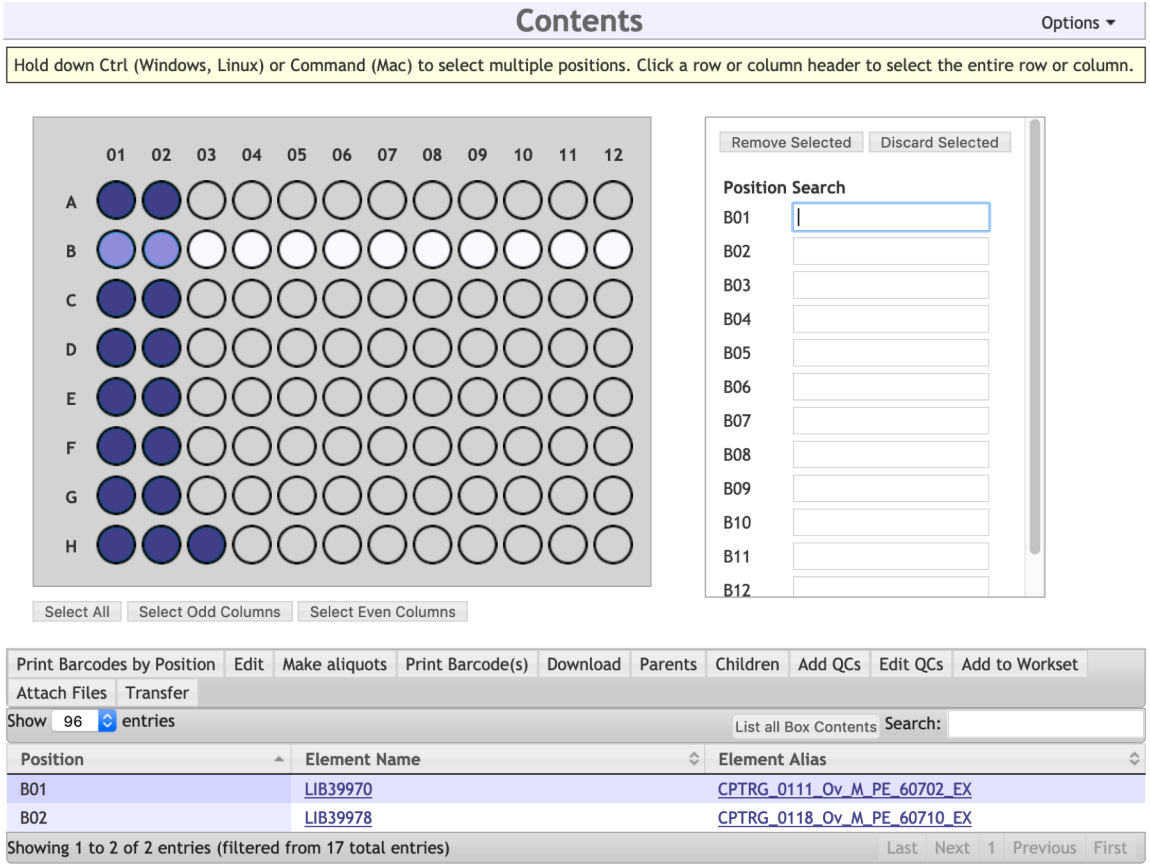
Name	Summary	Time
admin	barcode: n/a → 11223344, volume: n/a → 42, volume units: n/a → MICROLITRES	2020-07-27 09:19:13
admin	Sample created.	2020-07-27 09:12:11

Showing 1 to 2 of 2 entries First Previous 1 Next Last

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



Getting Help

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

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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