



# Olink<sup>®</sup> Signature Q100

User Manual

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# 1. About This User Manual

This user manual describes how to use the Olink® Signature Q100 system, including the instrument and the system software. For complete instrument specifications and unpacking/installation instructions, see Olink Signature Q100 Site Requirements.

**IMPORTANT:** Before using the Olink Signature Q100 system, read and understand the safety guidelines in this document. Failure to follow these guidelines may result in undesirable effects, injury to personnel, and damage to the instrument or property.

For complete safety information, see “10. Appendix: Safety”.


## 1.1 Safety Alert Conventions

Olink documentation uses specific safety alert conventions for presenting information that may require your attention. Refer to [Table 1](#) and [Table 2](#) for safety alert conventions for chemicals and instruments respectively.

### 1.1.1 Safety Alerts for Chemicals

For hazards associated with chemicals, this document follows the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and uses indicators that include a pictogram and a signal word that indicates the severity level:


Table 1. Safety alerts for chemicals

Indicator	Description
	Pictogram (see example) consisting of a symbol on a white background within a red diamond-shaped frame. Refer to the individual safety data sheet (SDS) for the applicable pictograms and hazards of the chemicals used.
<b>DANGER</b>	Signal word that indicates more severe hazards.
<b>WARNING</b>	Signal word that indicates less severe hazards.

### 1.1.2 Safety Alerts for Instruments

For hazards associated with instruments, this document uses indicators that include a pictogram and signal words that indicate the severity level:

Table 2. Safety alerts for instruments

Indicator	Description
	Pictogram (see example) consisting of a symbol on a white background within a black triangle-shaped frame. Refer to the instrument user guide for the applicable pictograms and hazards of the instrument usage.
<b>DANGER</b>	Signal word that indicates an imminent hazard that will result in severe injury or death if not avoided.
<b>WARNING</b>	Signal word that indicates a potentially hazardous situation that could result in serious injury or death if not avoided.
<b>CAUTION</b>	Signal word that indicates a potentially hazardous situation that could result in minor or moderate personal injury if not avoided.
<b>IMPORTANT</b>	Signal word that indicates information necessary for proper use of products or successful outcome of experiments.

## 1.2 Safety Data Sheets

Read and understand the SDSs before handling chemicals. To obtain SDSs for chemicals ordered from Olink, either alone or as part of this kit, go to [olink.com](http://olink.com) and search for the SDS using either the product name or the part number.

Some chemicals referred to in this user guide may not have been provided with your system. Obtain the SDSs for chemicals supplied by other manufacturers from those manufacturers.

# 2. System Overview

The Olink Signature Q100 system includes optical, thermal cycling, and software components necessary to perform protein expression analysis using proximity extension assay technology.

The Olink Signature Q100 system provides throughput for proteomics that is higher by orders of magnitude than conventional platforms using Integrated Fluidic Circuits (Chip; from now on referred to as chips)—nanofluidic circuits containing fluidic networks that automatically combine sets of samples with sets of primers. This innovative solution for real-time PCR provides experiment densities far beyond what is possible with microplate platforms, significantly reducing the number of liquid-handling steps and volumes per reaction.

## 2.1 Components of Olink Signature Q100

The Olink Signature Q100 system has a built-in computer that controls instrument operation and monitors its performance. The onboard computer is operated only through the touchscreen.

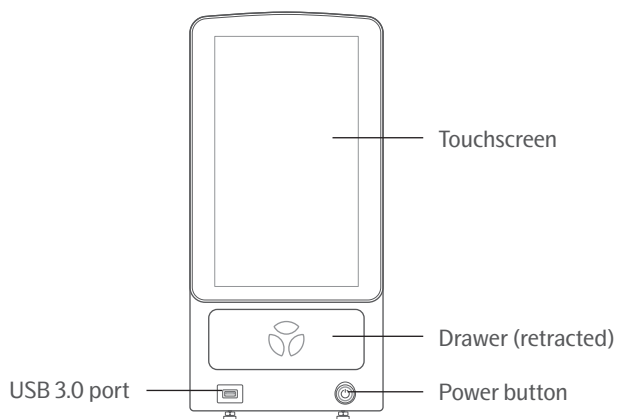

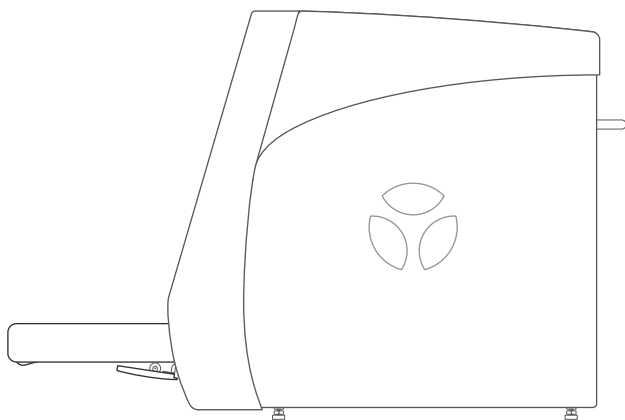


Figure 1. Olink Signature Q100 front view

 **NOTE:** The port on the front of the instrument supports USB 3.0. We recommend using a USB drive compatible with USB 2.0 or higher.



Olink Signature Q100 side view

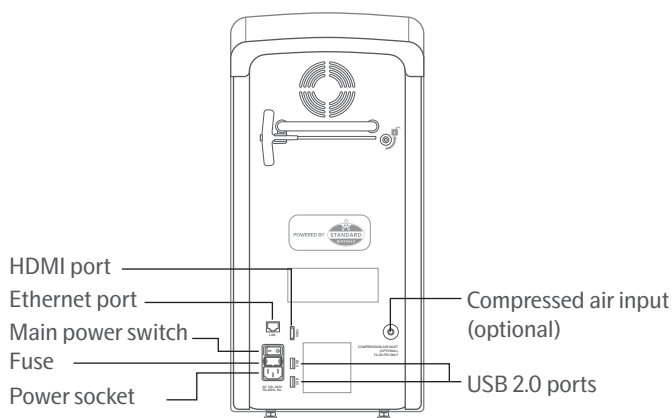


Figure 2. Olink Signature Q100 rear view

## 2.2 Olink Signature Q100 Interface Plates

The Olink Signature Q100 interface plates are specific to the type of chip you are using. Store interface plates in the storage container when not in use. The 96.96 and 48.48 Interface Plates come with the Olink Signature Q100 system.

Component	Label Color	Supported chip
Olink Signature Q100 Interface Plate, 96.96 (96010)	Green	Olink 96.96 chip for Protein Expression
Olink Signature Q100 Interface Plate, 48.48 (96011)	Blue	Olink 48.48 chip for Protein Expression
Olink Signature Q100 Interface Plate, 24.192 (96012)	Red	Olink 24.192 chip for Protein Expression

 **NOTE:** Each interface plate can be purchased individually from Olink.

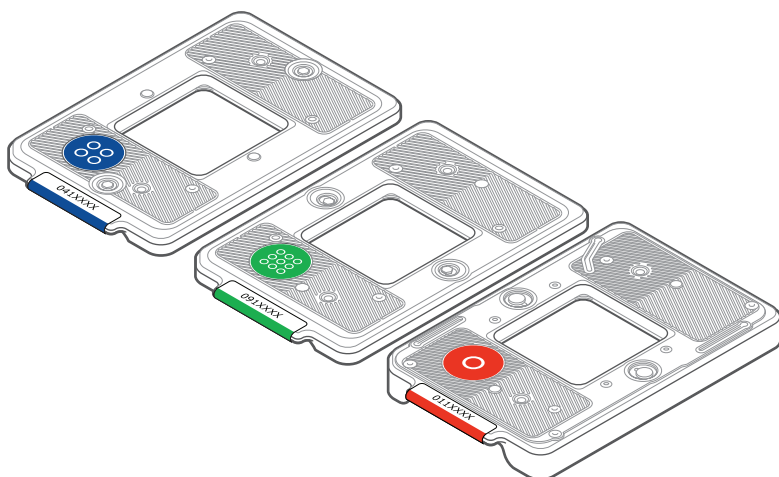


Figure 3. Olink Signature Q100 interface plates

## 2.3 Supported Chips

Olink Signature Q100 supports the following chips:

- Olink 96.96 chip for Protein Expression (95007)
- Olink 48.48 chip for Protein Expression (93007)
- Olink 24.192 chip for Protein Expression (99007)

## 2.4 Supported Panels

Olink Signature Q100 supports the use of the following panels:

- Olink® Target 96 panels
- Olink® Target 48 panels
- Olink® Focus panels

## 2.5 Instrument Specifications

Refer to the Olink Signature Q100 Site Requirements Guide for instrument specifications and the recommended environmental conditions.

## 2.6 Air Options

The Olink Signature Q100 system uses compressed air to pressurize fluids and control channels in the chip. The instrument contains an internal compressor that draws in ambient air by default. Optionally connect it to an in-house air source.

 **NOTE:** Use a clean, dry air (CDA) system whenever possible to help prevent corrosion within the pneumatic system.

To use in-house compressed air instead of running the internal compressor, attach 4 mm tubing into the compressed air inlet on the rear of the system and regulate the incoming air to 80–90 psi or 5.5–6.2 bar of CDA.

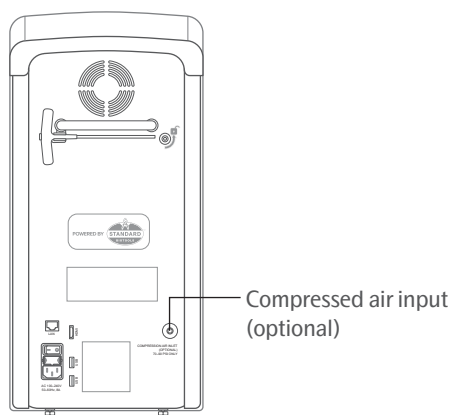




Figure 4. Compressed air inlet

## 2.7 Ethernet Option

If you connect the Olink Signature Q100 instrument to your network, you can use domain authentication to manage user accounts, import data directly from the instrument using the NPX Signature software, or configure instrument to automatically upload run data to a chosen network location. For more information about domain authentication, [“3.1.11 Enable Domain Authentication”](#).

Olink is not responsible for risks associated with connecting the instrument to a network.

 **NOTE:** To enable NPX Signature remote data functions for the Q100 instrument, ensure that the instrument is connected to the network and that TCP port 8085 (enabled by default) is not blocked.

 **NOTE:** For information about importing run data in NPX Signature software, see the Olink NPX Signature User Manual.

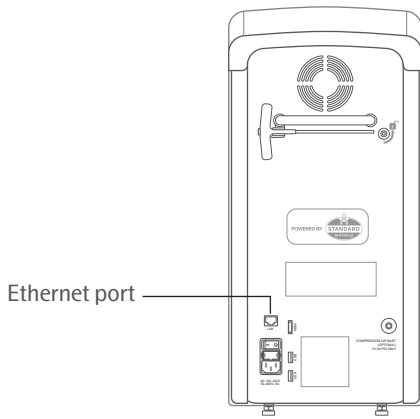


Figure 5. Ethernet port

## 2.7.1 Network Features

You can connect the Signature Q100 instrument to the network via the Ethernet port.

The Q100 has an ethernet port that has:

- A DHCP enabled network with a dynamic IP-address allocation (default)
- The ability to set a Static IP

When using the data transfer feature of NPX Signature, network communication attempts to the Instrument must allow TCP port: 8085.

When adding the Signature Q100 instrument to a network, it is advised to add it to a secured segmented network that cannot access the internet. Olink will not take any responsibilities for the risks associated with the networking of the instrument.

- The Instrument can be prevented from reaching the Internet for security considerations or for stability of the instrument. (See Network Segmentation)

## 2.7.2 Network Segmentation

### 2.7.2.1 Introduction

To handle any security issues in the Local Network and making sure that the risk to the connected equipment is as small as possible Network Segmentation is an important key factor. By segmenting the network, the following advantages can be reached:

- Damage control and limitation in case of an incident via the smaller attack surface. A smaller subset of network devices is within the same scope.
- Improved access control for external and internal network security.
  - *In this specific case the Signature Instrument should not reach the Internet and receive updates or be exposed to threats.*
- Reducing the attack plane and scope of compliance requirements related auditing
- Improved performance with less congestion on network traffic
- Better analytics around network monitoring, network access and network devices
- Endpoint device protection, especially important as IoT devices become more common

Network segmentation can boost your overall security policy by limiting access privileges to those who need it, protecting



the network from widespread cyberattacks and enabling better network performance by reducing the number of users in specific zones.

### 2.7.2.2 How to implement Network Segmentation

This is heavily dependent on the flavor of Network Equipment used, and how to specifically implement segmentation can only be answered when this is known. There are, however, a few basic technologies that is common for most solutions.

- Firewall/router
  - A firewall/router is used to handle multiple networks, and these can also be controlled through Access Rules. With Access Rules we can prevent certain networks to reach resources they should not as well as protecting the network resources from being reached from untrusted source. A capable firewall is also able to do much more, like web filtering, intrusion prevention, antispam protection and preventing virus attacks.
    - o In a Network Segmentation Scenario, a VLAN or a separate LAN for the instrument should be created. A VLAN (Virtual Local Area Network) has the advantage to use the same switches as other network segments – thus reducing cost and space.
- Switch
  - A Network Switch is another key component and utilizing VLANs can be used to segment the network. By setting specific VLANs on different ports the switch can be segmented, and the different networks can be isolated. Together with the Firewall, traffic between the networks can be established if the scenario requires it.
- Bridging computer
  - A bridging computer can be used to handle multiple networks and be controlled by Access Controls and Security scanning mandated by your IT department. A computer ethernet connected to the instrument can retrieve the run files and it can simultaneously be connected to your corporate network to forward the run files to your desired internal network after any IT scanning or transfer software finishes its scan. In a bridging computer scenario, communication will likely be needed between your instrument operators and the IT department.
  - One possible scenario is connecting your bridging computer with an ethernet cable directly to the instrument. By doing this you must set the IP-address on both computer and instrument with a static IP. This would create a separate network and prevent the instrument from reaching non-secure parts of the network.

## 2.8 Regulatory Compliance

The following directives and harmonized standards were used to evaluate the safety and performance of the Olink Signature Q100 system:

### 2.8.1 General Regulations and Requirements




- 2014/35/EU European Parliament Low Voltage Directive
- 2014/30/EU European Parliament Directive: Electromagnetic Compatibility
- 2011/65/EU Restrictions on the use of certain hazardous substances in Electrical and Electronic Equipment (RoHS)
- 2012/19/EU Waste Electrical & Electronic Equipment (WEEE)
- EU Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH), Regulation (EC) No 1907/2006
- UK Electromagnetic Compatibility Regulations 2016
- UK Electrical Equipment (Safety) Regulations 2016
- UK The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 No 3032

### 2.8.2 Harmonized Standards

- EN 61326-1
- IEC 61010-1 (including EN, CAN/CSA22.2, UL national deviations)
- IEC 61010-2-010
- IEC 61010-2-081 (including CAN/CSA22.2 national deviations)

### 2.8.3 Conformity Symbols on the Instrument

The instrument has the following conformity markings:

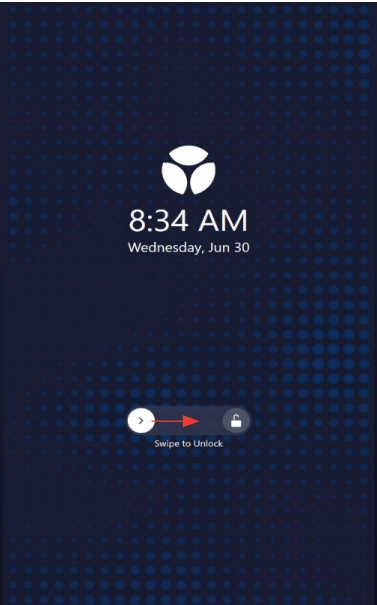
Conformity mark	Description
	Indicates conformity with safety requirements for Canada and the United States.
	Indicates conformity with European Union requirements for safety and electromagnetic compatibility.
	Indicates conformity with the applicable requirements for products sold within Great Britain.

# 3. Olink Signature Q100 Operation

## 3.1 Olink Signature Q100 System Software

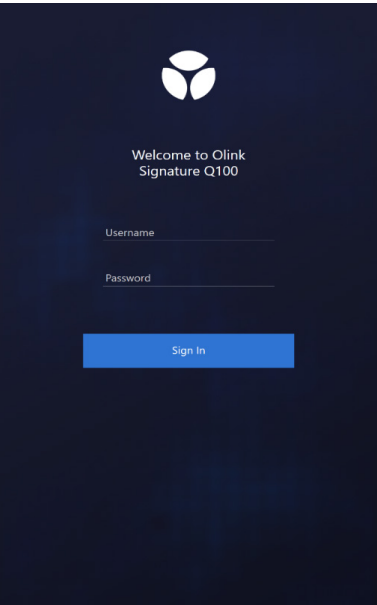
### 3.1.1 Unlock the Touchscreen

Swipe  toward the unlock icon to unlock the touchscreen.

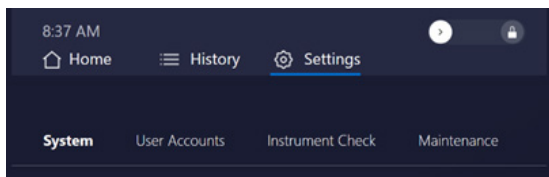


### 3.1.2 Log In to the Olink Signature Q100 System

If required, enter your username and password to log in to the system.



After logging in, you have the following options:

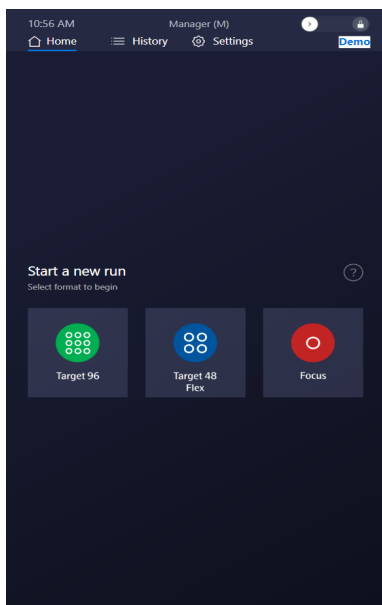


- **Home** screen: Start a new run.
- **History** screen: View run logs for previous runs, export run data, and delete runs.
- **Settings** screen:
  - **System:** View system information (GUI version, IP address), enable or disable user authentication at login, change the length of time before the screen locks, change the scheduled time for the automatic periodic instrument checks to run, configure network run upload, change the time settings for the system.
  - **User Accounts:** Create users, change user permissions, disable or delete user accounts, and reset user passwords. To access the User Accounts settings, you must have an account that has Manager permissions (see section [“3.2 User Accounts”](#)).
  - **Instrument Check:** Run instrument checks on the Olink Signature Q100 instrument and export instrument logs. For more information, see section [“5.1 Run Instrument Checks”](#).
  - **Maintenance:** The Maintenance settings can only be accessed by service personnel.


### 3.1.3 Start a New Run

To start a new run, tap the appropriate format for your chip type (**Target 96**, **Target 48**, or **Focus**). See [“4. Olink Signature Q100 Workflows”](#) for instructions about specific workflows.

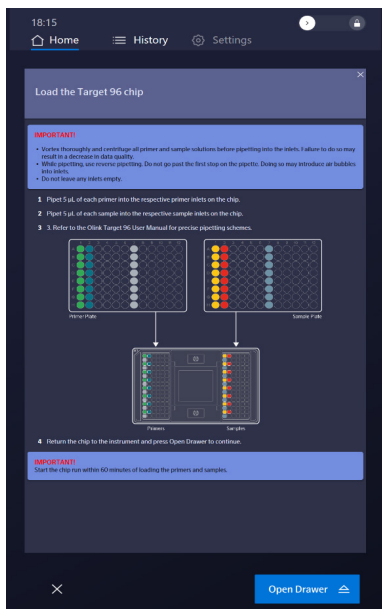
- For the Target 96 and Target 48 runs, see [“4.2 Olink Target Workflows with the 96.96 and 48.48 chip”](#).
- For the Focus run, see [“4.3 Olink Focus Workflow with the 24.192 chip”](#).



### 3.1.4 Onscreen Help


Olink Signature Q100 includes an on-screen help system. During the process steps of a run, tap  to open a new window that contains instructions for how to perform the tasks required for that step of the workflow.

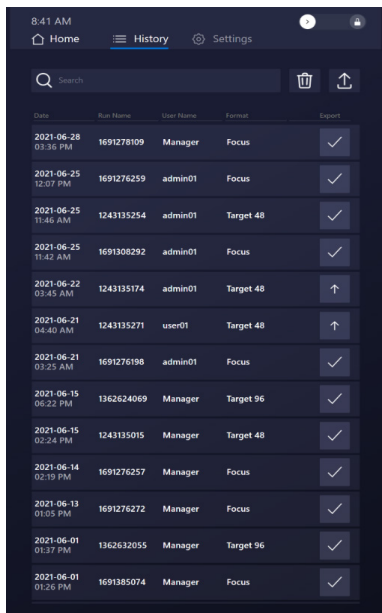
To close the on-screen help window, tap  in the top right corner.



### 3.1.5 View Run Logs and Export Data

Tap **History** to

- view run details for previous runs
- export run data
- export comprehensive logs
- delete run logs. Runs that have been exported show a checkmark () in the right column.




#### 3.1.5.1 Export Data from a Run using USB

1. Insert a USB drive (preferably 3.0) into the USB port on the front of the instrument.

2. Identify the desired run log in the **History** screen.

3. Select and export the run files:


- Tap  or  in the Export column to select a run, then tap .

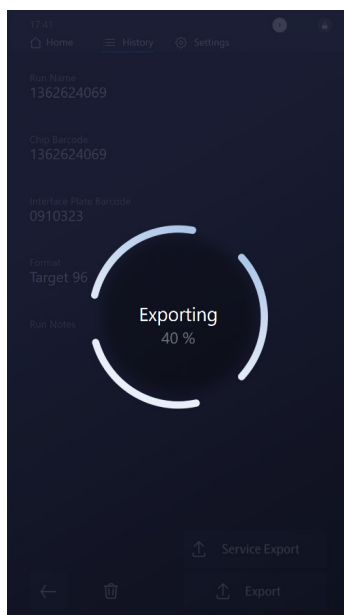
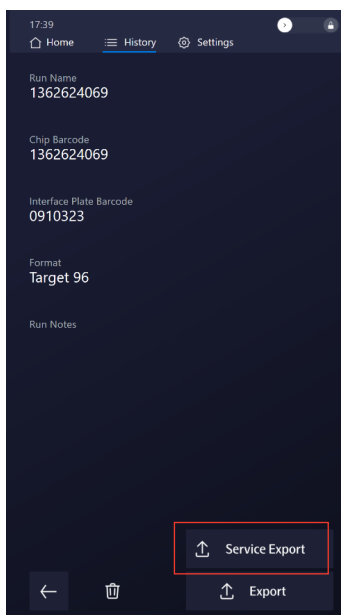
or

- Tap a run to view the run details screen, then tap **Export**.




The files are copied to the USB drive. A Success message is displayed when the export is complete.

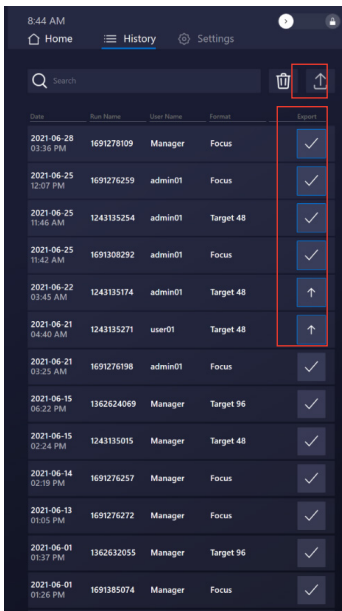
If there was a problem with the run, Technical Support might request the raw data files for that run. Insert a USB drive into the USB port on the instrument's front, then tap **Service Export** to export the raw data. Send the files to Olink Support.

 **NOTE:** The service export files can be up to 3 GB. The percent completed is displayed on the screen while the files are copied to the USB drive.



### 3.1.5.2 Export Data from Multiple Runs using USB

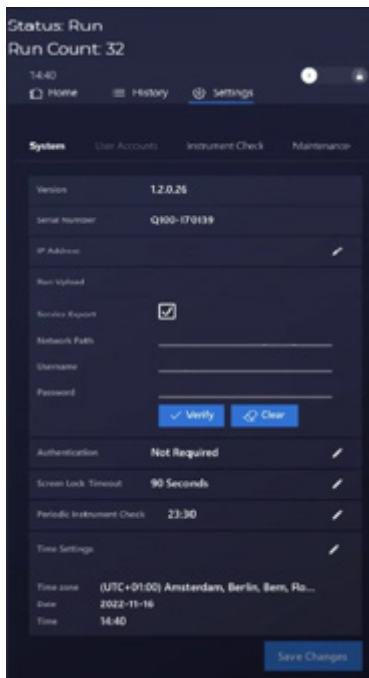
1. Insert a USB drive into the USB port on the front of the instrument.
2. In the History screen, tap  or  in the Export column to select each run you want to export.
3. Tap  (Export).



The files are copied to the USB drive. A Success message is displayed when the export is complete.

### 3.1.5.3 Export Data using the Network Run Upload Feature (only if Q100 has been networked)

1. Under **Settings>System>Run Upload**, enter the network path to the run upload folder.



2. Enter valid domain credentials for the network location.
3. Tap **Verify** to ensure that the folder and corresponding credentials are valid and reachable.

4. Optional: Select the **Service Export** box to upload the service export instead of the standard “.q100” file.

Once these settings have been verified, the runs listed on the **History** tab will be moved to the selected location.

Successfully uploaded runs via the network will be indicated by a  under the  on the **History** tab.

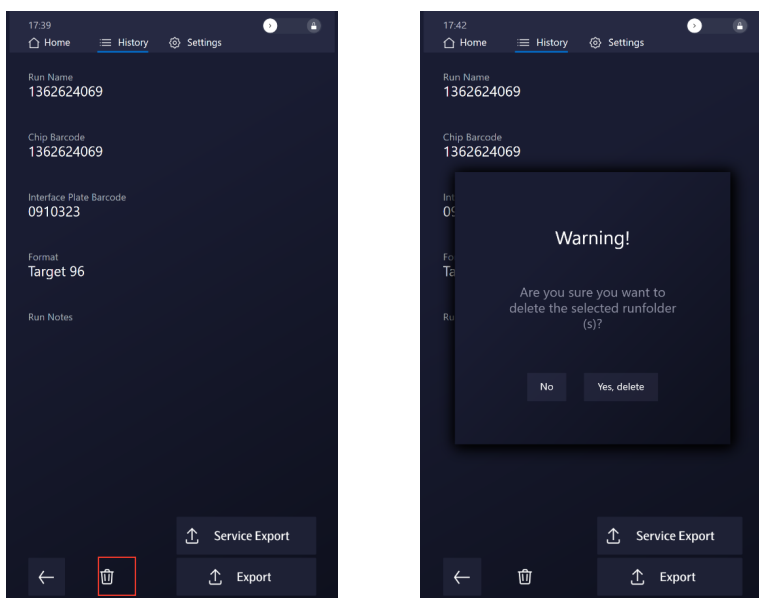
Once a run has been completed and the chip has been ejected, the run data will upload to the selected network folder.

### 3.1.6 Delete Run Files

After you export run files, you can delete them from the instrument to free up storage.

The hard drive of the system can hold a minimum of 350 runs. The system displays a message when you have run out of capacity to complete the next run (less than 5 GB of space).

1. In the run details screen, tap .



2. Tap **Yes, delete** to delete the selected run folder. If you do not want to delete the run, tap **No**. A Success message is displayed when the deletion is complete.

### 3.1.7 Delete Multiple Run Files

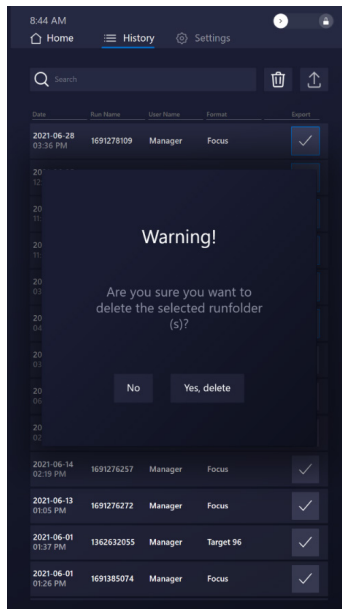
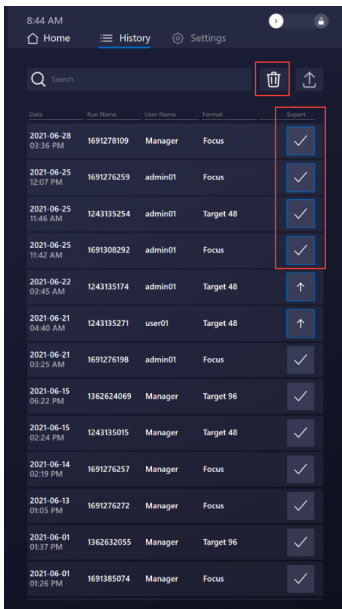
You can delete the already exported run files. In the **History** screen, exported runs show a checkmark () in the right column.

**NOTE:** Run files must be exported before they are deleted.

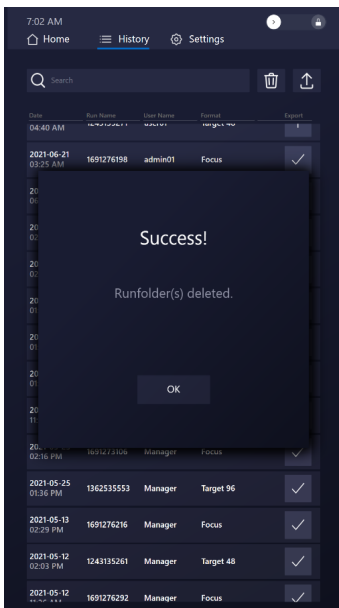
1. Go to the **History** screen.

2. Tap  or  in the Export column to select each run you want to delete, then tap .



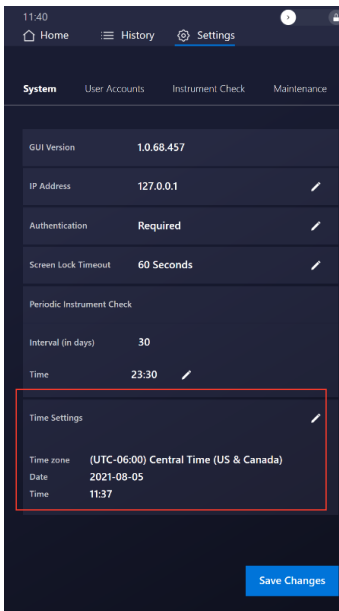


3. Tap **Yes, delete** to delete the selected run folders. If you do not want to delete the runs, tap **No**. A Success message is displayed when the deletion is complete.

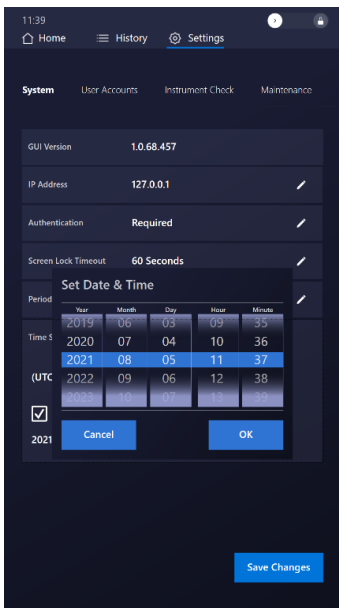


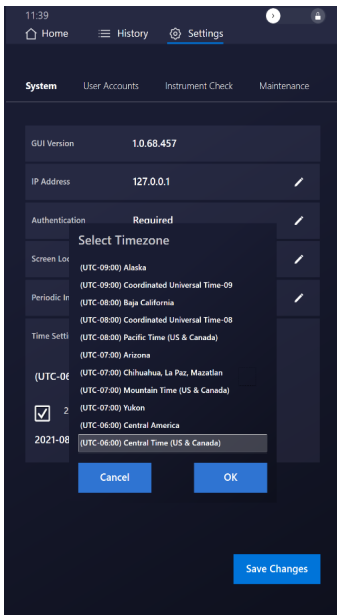
### 3.1.8 Change System Time Settings

1. Tap **Settings > System**, then tap  (Edit) next to **Time Settings**.

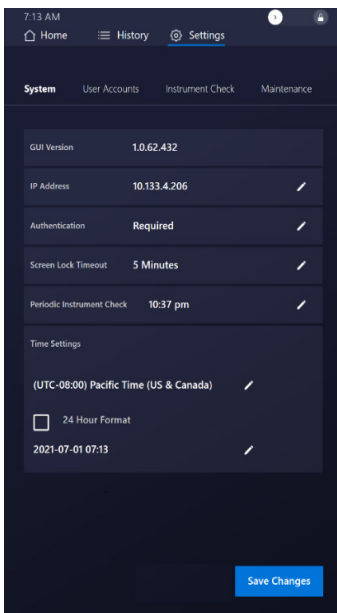


2. Change the time zone and the date and time, then tap **OK**.





3. To view the time in 24-hour format, select the **24 Hour Format** checkbox.

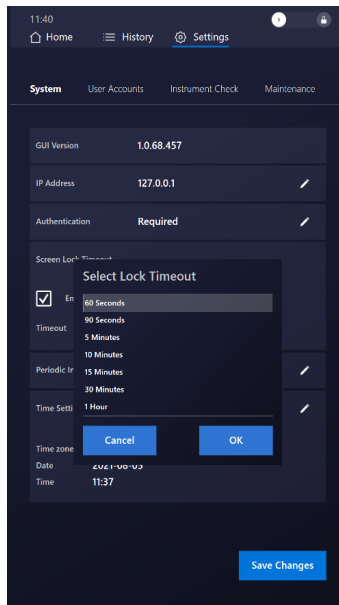
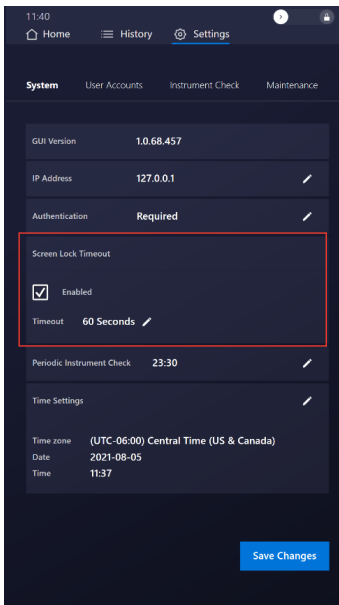


4. Tap **Save Changes**. Tap **Yes** to update the system settings. If you do not want to keep your changes, tap **Cancel**.

### 3.1.9 Change the Screen Lock Timeout

1. Tap **Settings > System**, then tap  (Edit) next to **Screen Lock Timeout**.

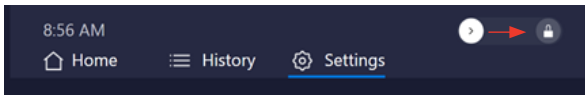
Choose the amount of time you want your screen to stay on after the last user touches it, then tap **Save Changes**. If you do not want the screen to lock, clear the Enabled checkbox.



2. Tap **Yes** to update the system settings. If you do not want to keep your changes, tap **Cancel**.



**NOTE:** To lock the screen before the specified time has elapsed, swipe the  button toward the lock icon in the top right corner of the screen.




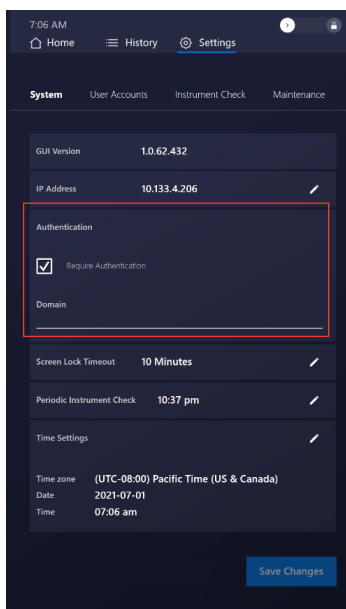
### 3.1.10 Enable or Disable User Authentication

You can require users to log in to the instrument with a password.



**IMPORTANT:** To enable or disable user authentication, you must log in with an account with Manager permissions.

1. Tap **Settings > System**, then tap  (Edit) next to **Authentication**.
2. Enter a Manager username and password (contact Olink Technical Support if you are the instruments Manager and you don't have access to username and password.).
3. Tap to enable or disable the **Require Authentication** checkbox, then tap **Save Changes**.




4. Tap **Yes** to update the system settings. If you do not want to keep your changes, tap **Cancel**.

After enabling authentication, you can access the User Accounts settings and add or remove users and change user information. For more information about user accounts, see [“3.2 User Accounts”](#).

### 3.1.11 Enable Domain Authentication

When user authentication is enabled, you have the option to use your lab's domain authentication system to manage user accounts.


To enable domain authentication for your instrument:

1. Create the following user groups in the lab's Windows Active Directory:
  - Olink Instrument Operators
  - Olink Instrument Managers
2. Add users to the appropriate user groups.
3. Connect an Ethernet network cable to the port on the back of the instrument.
4. Plug the instrument Ethernet cable into an active port that can communicate with the lab's active directory.
5. Enable authentication on the instrument:
  - a. Tap **Settings** > **System**, then tap  (Edit) next to **Authentication**.
  - b. Tap to enable the **Require Authentication** checkbox, tap **Save Changes**, then tap **Yes** to update the system settings.

After enabling authentication you can log in to the instrument using your Windows Domain credentials.

## 3.2 User Accounts

After enabling authentication, you can access the User Accounts settings and add or remove users and change user information.


 **NOTE:** To obtain or reset the Manager password, contact Technical Support to request a recovery key.

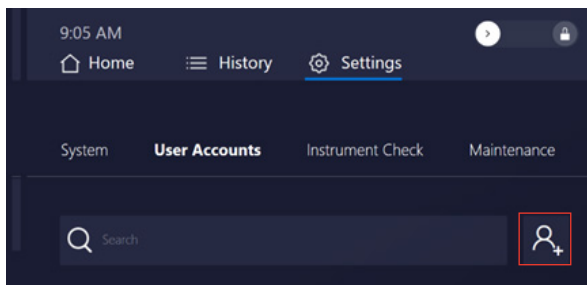
The Olink Signature Q100 system has three types of user accounts:

Account Type	Description
Manager	Managers can: <ul style="list-style-type: none"> <li>• Log into the system</li> <li>• Start new runs and abort runs started by any user</li> <li>• Add new users</li> <li>• Change other users' settings, including permissions and password</li> </ul>
Operator	Operators can: <ul style="list-style-type: none"> <li>• Log into the system</li> <li>• Start new runs and abort runs that they started</li> </ul> Operators cannot: <ul style="list-style-type: none"> <li>• Operators cannot abort a run started by a different user.</li> <li>• Delete user accounts</li> </ul>
Disabled	A user with a Disabled account is no longer allowed to log in, but the account is still in the system for auditing purposes.

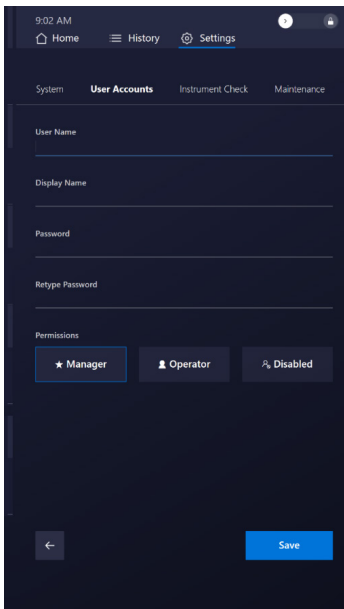
### 3.2.1 Add a New User

**IMPORTANT:** To add a new user, enable user authentication, and log in with an account with Manager permissions.

1. Log in to the Olink Signature Q100 system as a Manager.
2. Tap **Settings > User Accounts**.
3. Tap  (New User).



4. Enter the information for the new user:
  - Username: the name used to log in to the system.
  - Display name: the name displayed in the History screen and the run information.
  - Password: the password used to log in to the system.
  - Permissions: Select **Manager** or **Operator**.



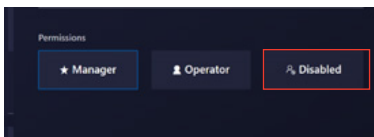
5. Tap **Save**.

### 3.2.2 Disable a User Account

A user with a Disabled account is no longer allowed to log in, but the account is still in the system for auditing purposes.

**IMPORTANT:** *To disable a user account, you must log in with an account that has Manager permissions.*


1. Log in to the Olink Signature Q100 system as a Manager.
2. Tap **Settings > User Accounts**.
3. Tap a user to open the details screen.
4. For Permissions, select **Disabled**.

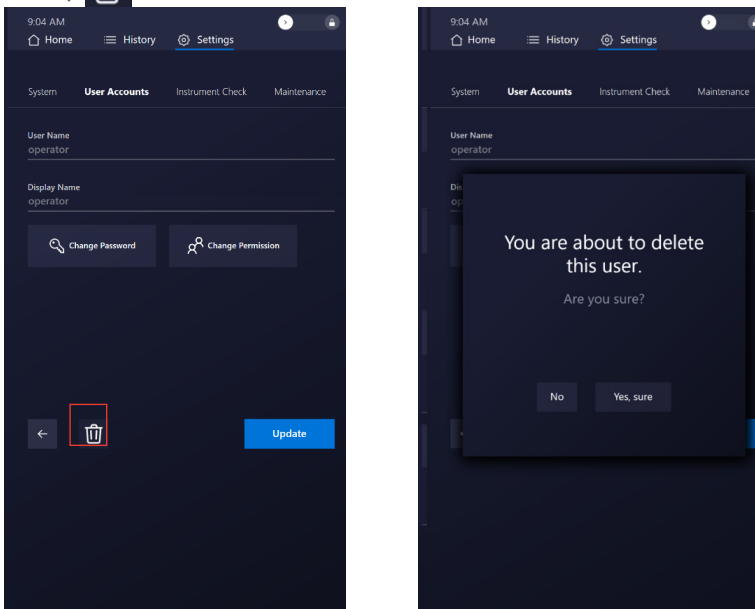


5. Tap **Save**.

### 3.2.3 Delete a User

**IMPORTANT:** To delete a user, you must log in with an account that has Manager permissions.

1. Log in to the Olink Signature Q100 system as a Manager.
2. Tap **Settings > User Accounts**.
3. Tap a user to open the details screen.
4. Tap 

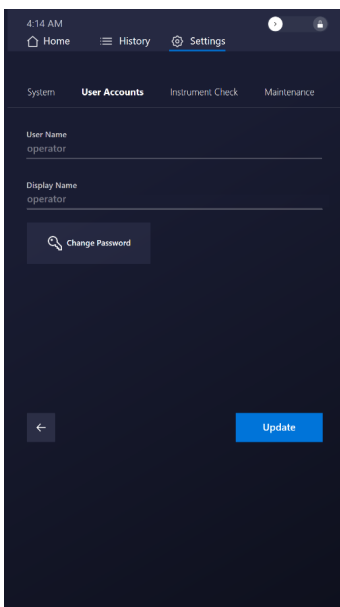


5. Tap **Yes, sure** to delete the user account. If you do not want to delete the user account, tap **No**.

### 3.2.4 Change Your Password

When Authentication is enabled, a user with an Operator account can change their password.

1. Log in to the Olink Signature Q100 system.
2. Tap **Settings > User Accounts**.
3. Tap your username to open the **Details** screen.
4. Tap **Change Password**, then follow the prompts to change the password.





## 3.3 Best Practices

**IMPORTANT:** Read and understand the safety information in “10. Appendix: Safety”.

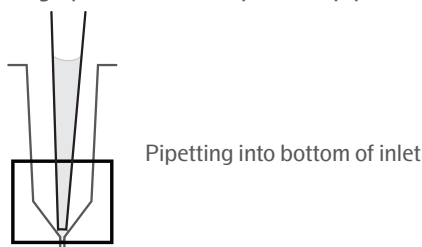
For the overall success of the experiment, we recommend the following best practices:

### 3.3.1 Chip and Control Line Fluid Handling

- Use the chip within 24 hr of opening the foil envelope.
- Inspect the chip for any signs of visible damage before use. Ensure that the barcode label is intact, and the chip surfaces are clear of particulates.
- To avoid loss of control line fluid, do not evacuate air from a syringe before injecting control line fluid.
- Avoid bending the syringe tip of the control line fluid.
- Be careful when removing the syringe cap of the control line fluid to prevent drips.
- Before removing the syringe from the accumulator, ensure that all of the control line fluid and air are purged from the syringe. This is to avoid dripping fluid on the chip surface. Residual control line fluid or air in the syringe tip is normal.
- Control line fluid that occurs on the chip exterior or inlets makes the chip unusable. If this occurs, use a new chip.
- During use, take care to avoid introducing particulates, reagents, and fluids to the chip surface.

### 3.3.2 Bubble Prevention

- Vortex the 96-well primer and sample plates gently (low speed) but thoroughly (at least 5 sec) to allow all reagents to mix homogeneously.
- After vortexing the primer and sample mixes, centrifuge them to collect all compounds at the bottoms of the wells before pipetting into the chip inlets. Failure to do so may result in a decrease in data quality.
- Check the source plates or tubes for bubbles before pipetting.
- Check pipette tips for air gaps while pipetting.
- Pipet reagents slowly and carefully to transfer entire volumes, to minimize bubbles, and ensure accurate and precise delivery of liquids.
- To avoid creating bubbles in the chip inlets, pipet vertically and directly into the bottom of the inlet, as shown, and do not go past the first stop on the pipette. If a bubble occurs, ensure that it floats to the top of the inlet.




- If necessary, remove medium-to-large bubbles from a chip inlet by popping them with a new pipette tip or by removing the contents of the inlet by pipette and then carefully re-pipetting the contents into the inlet.
- Place the chip on a black surface to reduce glare and make it easier to see the liquid in each inlet when looking for bubbles.

# 4. Olink Signature Q100 Workflows

## 4.1 Workflow Overview

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Target 48 and 96/Focus: Inject control line fluid into the accumulator(s) on the chip Target 48 and 96: Remove protective film under chip and perform chip preparation in Signature Q100.	Target 48 and 96/Focus: Prepare the detection mix and pipet to detection plate, add samples to the detection plate. Thaw primer plate. Focus: Thaw pressure fluid.	Target 48 and 96: Remove the chip from the instrument after completed chip preparation. Target 48 and 96/Focus: Pipet each sample from the detection plate, and each primer from the primer plate onto the chip.	Target 48 and 96: Run the chip and collect data on Olink Signature Q100. Focus: Add pressure fluid and actuation fluid. Remove protective film under chip and run the chip and collect data on Olink Signature Q100.	Transfer the run data using a USB drive or directly import data from the Signature Q100 to the NPX Signature software.	Analyze data using the NPX Signature software.

### Step Descriptions for 48.48, 96.96 and 24.192 (Focus) chips

Workflow Step	
1	Target 48 and 96/Focus: Inject control line fluid into the accumulator(s) on the chip (only use top accumulator for Focus on the 192.24 chips). Target 48 and 96: Prepare the chip on Signature Q100. This primes the chip ready for use. .  <b>NOTE:</b> Remember to remove the protective film at this stage.
2	Target 48 and 96/Focus: Prepare the detection mix and pipet to detection plate, add samples to the detection plate. Seal plate, vortex and spin down. Thaw primer plate. Focus: Thaw pressure fluid.
3	Target 48 and 96: Remove the chip from the instrument after completed chip preparation Target 48 and 96/Focus: Pipet each sample from the detection plate and primer from the primer plate onto the chip. Remove any bubbles using a syringe needle.
4	Focus: Add control line fluid and pressure fluid to 192.24 chip. Remove protective film from bottom of chip. Target 48 and 96/Focus: Remove dust from chip by gently touching chip surface with adhesive tape. Run the chip and collect data on Olink Signature Q100.
5	Transfer the run data using a USB drive or directly import data to the NPX Signature software.
6	Analyze data using the NPX Signature software.

## 4.2 Olink Target Workflows with the 96.96 and 48.48 chip



**NOTE:** Prepare your primers and samples as described in the Olink Target 96 User Manual (Olink 0935) or the Olink Target 48 User Manual (Olink 1141).

## 4.2.1 Prepare the 96.96 or 48.48 chip

Before pipetting primers and samples into the chip, you must prepare the chip with control line fluid.

### 4.2.1.1 Inject Control Line Fluid into the Accumulators

**IMPORTANT:** When injecting control line fluid:

- Follow the best practices for handling chips and control line fluid, see “3.3.1 Chip and Control Line Fluid Handling”.
- Only use Olink® Control Line Fluid for 96.96 chip syringes or Olink Control Line Fluid for 48.48 chip syringes. Control line fluid syringes are prefilled according to a specific chip type.

1. Remove the control line fluid syringes from the packaging and the chip from the box and foil envelope.

**IMPORTANT:** To avoid loss of control line fluid: Do not evacuate air from a syringe before injecting control line fluid. (Step 4).

Optional step to ensure proper chip function:

2. Actuate the check valves:
  - a. Place the chip on a flat surface.
  - b. Use the syringe with the shipping cap to actuate the check valve in each accumulator with gentle pressure. Ensure that the poppet can move freely up and down (Figure 7).

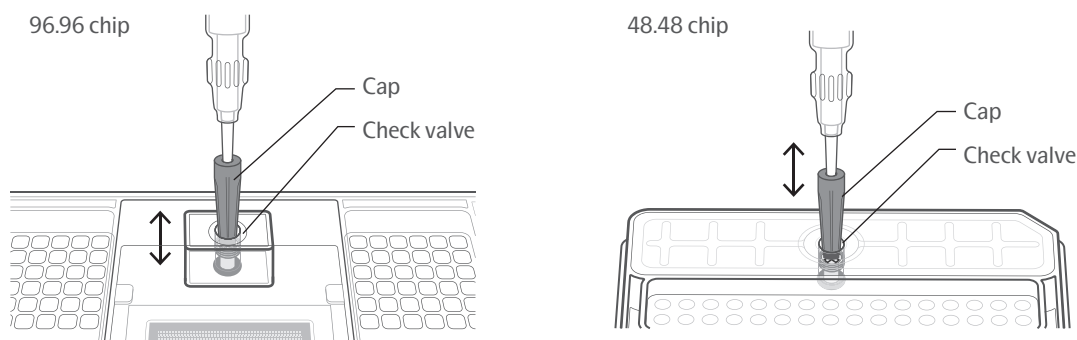


Figure 6. Actuating the check valve in the top accumulator on the Olink 96.96 chip and the Olink 48.48 chip

3. Hold the syringe firmly in one hand with the tip facing up and away from the chip, pull back on the plunger slightly to create negative pressure, and remove the shipping cap with the other hand. Be careful when removing the syringe cap of the control line fluid to prevent drips.
4. Holding the chip at a 45° angle, insert the syringe tip into an accumulator (Figure 7).

**IMPORTANT:**

- Avoid bending the syringe tip. Be careful when removing the syringe cap to prevent drips.
- Control line fluid on the chip exterior or inlets makes the chip unusable. If this occurs, use a new chip.

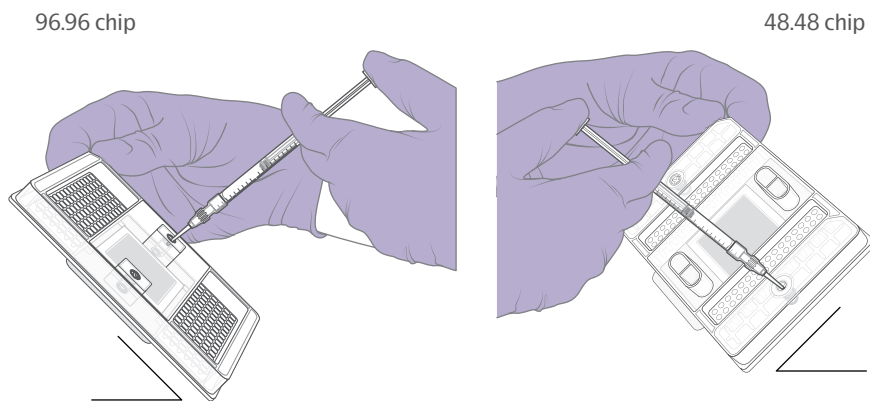


Figure 7. Inserting the syringe into an accumulator

5. Insert the syringe tip into one of the spaces between the arms of the X at the top of the valve and then press down gently to move the black O-ring to the side. Visually confirm that the O-ring has moved (Figure 8).
6. Release the control line fluid:
  - a. Press the syringe plunger to release the control line fluid into the accumulator while maintaining the 45° angle to allow the liquid to flow away from the O-ring.
  - b. Slowly inject the control line fluid by pushing down on the syringe plunger. The control line fluid flows into the accumulator through the open check valve. Use the entire contents of the syringe.
  - c. After fully depressing the plunger, wait approximately 5 sec before withdrawing the syringe. Before removing the syringe from the accumulator, ensure that all the control line fluid and air are purged from the syringe. This is to avoid dripping fluid on the chip surface. Residual control line fluid or air in the pipette tip is normal.

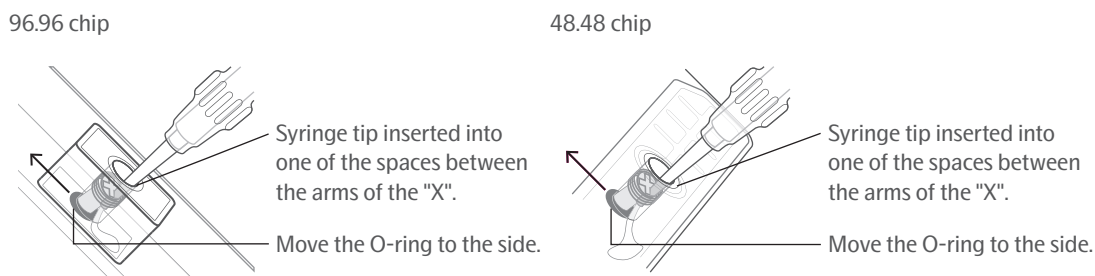


Figure 8. Injecting control line fluid into the chip

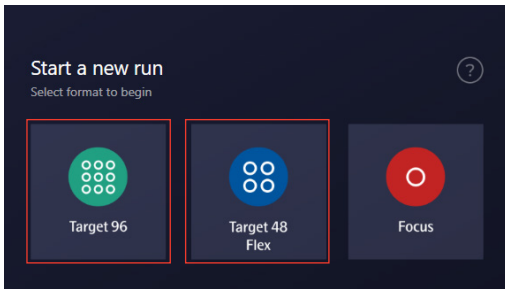
7. Check to ensure that the O-ring returns to its normal position after the syringe is removed.
8. Pull the protective film down and away from the bottom of the chip. Discard the film.
9. Place the appropriate (chip-specific) Olink Signature Q100 interface plate over the chip. Align the barcoded edges.

**IMPORTANT:** Load the chip within 60 min of completing chip preparation.

#### 4.2.1.2 Prepare the Target 48 or Target 96 chip on Olink Signature Q100

 **NOTE:** If you see the Lock icon, swipe it to unlock it.

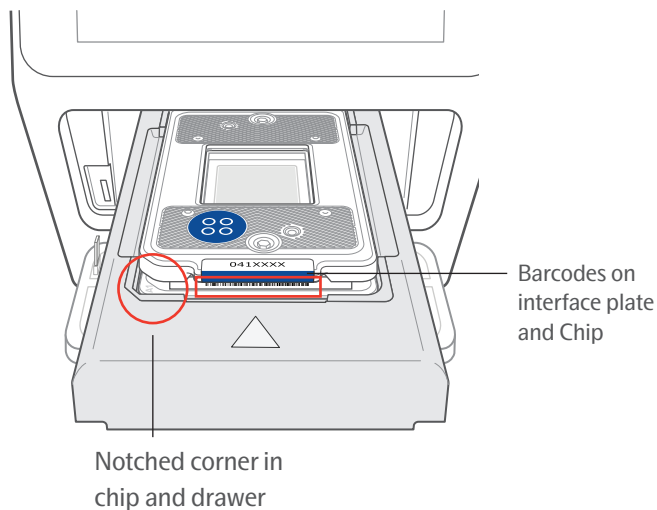
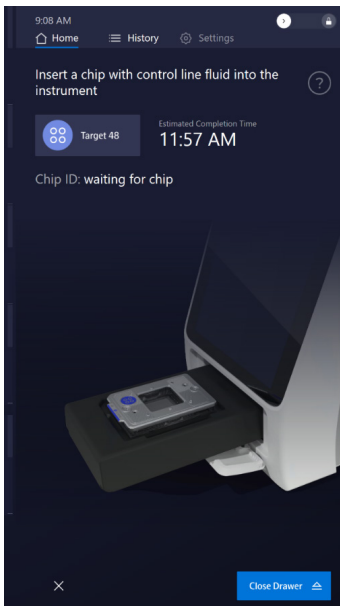
1. If required, log into the Olink Signature Q100 instrument.
2. On the **Home** screen, select the format that matches the chip you are using:
  - Tap **Target 96** for the 96.96 chip.
  - Tap **Target 48/Flex** for the 48.48 chip.



 **NOTE:** For more information about the task displayed on the screen, tap .



3. After you tap **Target 96** or **Target 48**, the drawer opens.
4. Place the chip containing control line fluid and the interface plate on the drawer. Align the notched corner of the chip to the notch on the drawer and face the barcoded edges of the chip and interface plate forward.

 **NOTE:** Make sure that the protective film has been removed.

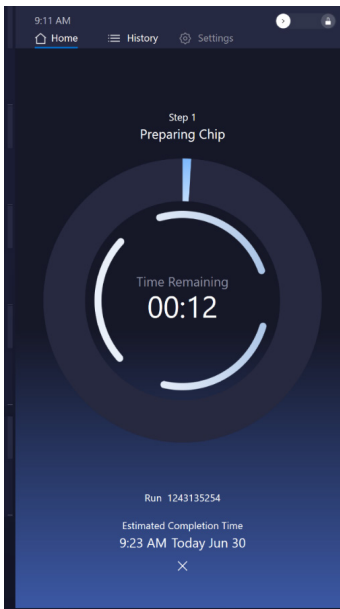



5. Tap **Close Drawer**. The system scans the chip barcode, closes the drawer, and then displays the Ready to start chip preparation screen.



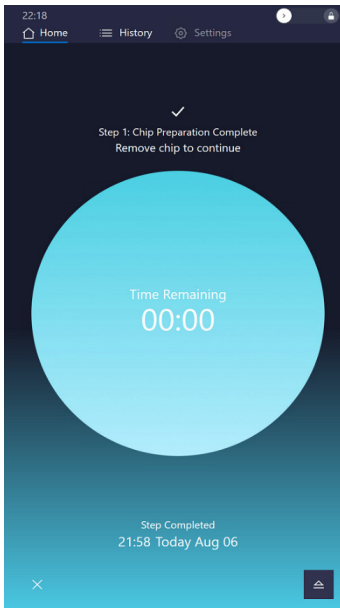
 **NOTE:** If you need to eject the chip, tap  (Eject) at the bottom of the screen to return to the Insert a chip with control line fluid into the instrument screen.

6. Tap **Start**. Preparation begins and the screen shows the remaining time.




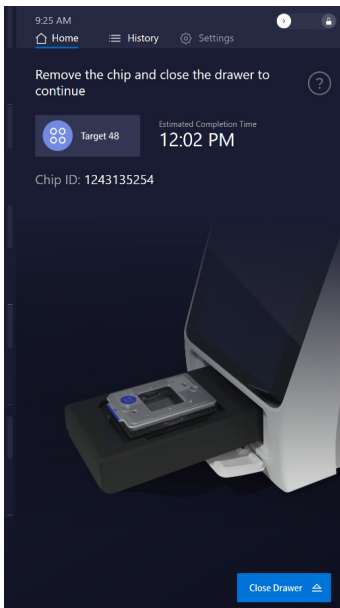
 **NOTE:** If you need to abort the preparation, tap  (Abort) at the bottom of the screen. See “5.8 Abort a Run in Progress” for more information.

7. When preparation is complete, tap  (Eject) in the bottom right corner to open the drawer.



8. Remove the chip and interface plate from the instrument, then tap **Close Drawer**.

 **IMPORTANT:** *Do not leave the drawer open while you are pipetting samples and primers into the chip.*



## 4.2.2 Pipet Primers and Samples into the 96.96 or 48.48 chip

### **IMPORTANT:**

- Vortex all primers, samples, and control reagents thoroughly, then centrifuge them to collect contents before removing the plate seals and pipetting the mixes into the chip inlets. Failure to do so may result in a decrease in data quality.
- While pipetting, do not go past the first stop on the pipette. Doing so may introduce air bubbles into inlets.
- Follow the best practices for preventing bubbles, see “3.3.2 Bubble Prevention”.

Refer to *Figure 9* or *Figure 10* as appropriate when pipetting the final sample and primer mixes into the 96.96 or 48.48 chip. Note the orientation of the A1 corner. The barcoded edge is on the left side.



**NOTE:** Olink recommends using the reverse pipetting method when pipetting the sample and primer mixes. See the *Olink® Target 96 User Manual (Olink 0935)* or the *Olink® Target 48 User Manual (Olink 1141)*.

1. Remove the interface plate from the prepared chip.
2. Pipet 5  $\mu$ L of each final sample mix into the respective sample inlets on the chip.
3. Pipet 5  $\mu$ L of each final primer mix into the respective primer inlets on the chip.
4. Replace the interface plate over the chip, aligning the barcoded edges.
5. Use clear tape to remove any dust particles or debris from the chip surface, if necessary.



**IMPORTANT:** Run the chip on Olink Signature Q100 within 60 min of pipetting the samples and primers.

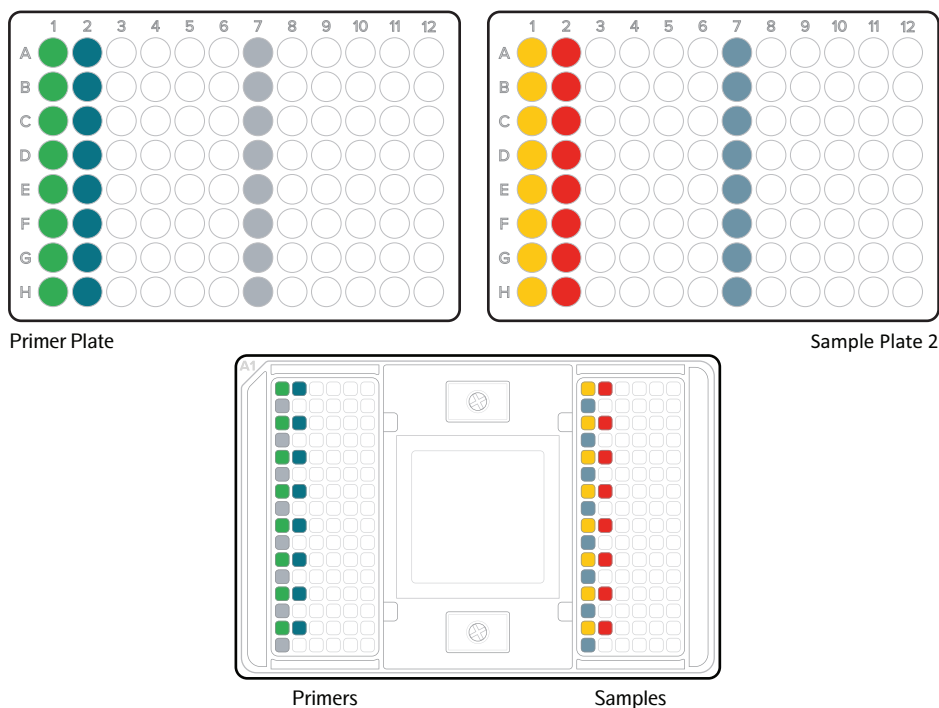


Figure 9. Pipetting map for 96.96 chip



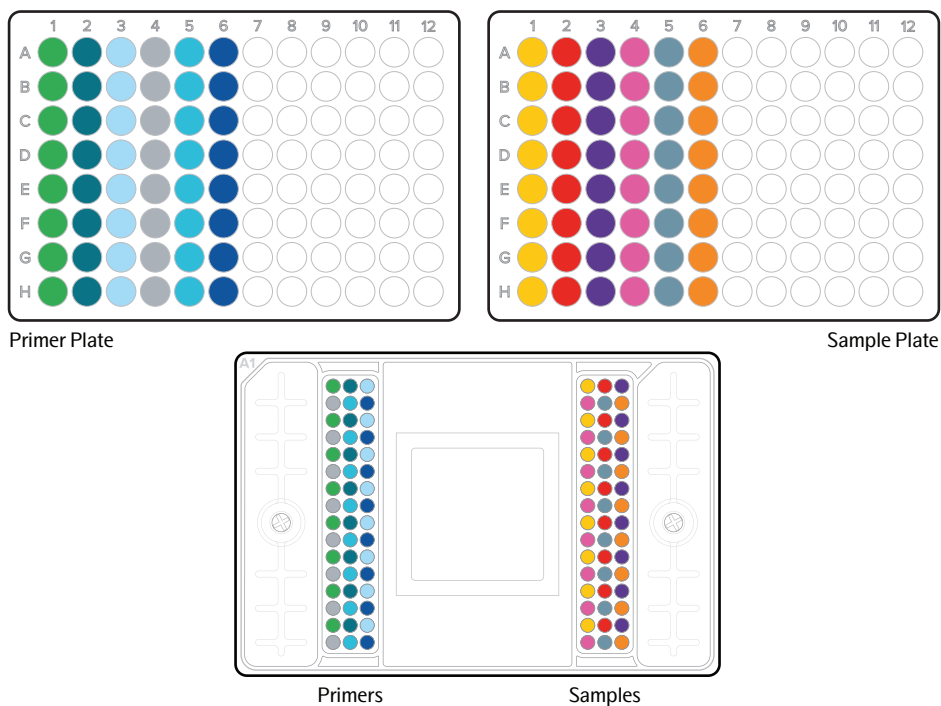
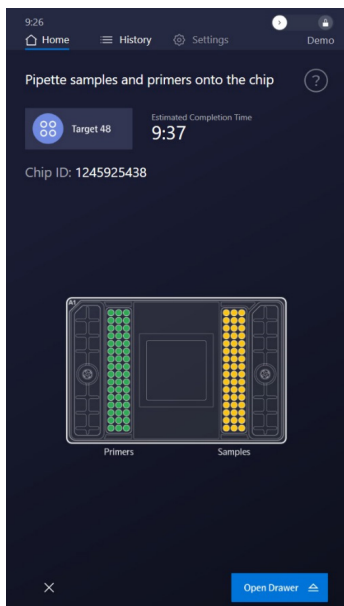


Figure 10. Pipetting map for the 48.48 chip

### 4.2.3 Run the 96.96 or 48.48 chip on Olink Signature Q100

**NOTE:** If you see the Lock icon, swipe it to unlock the system.

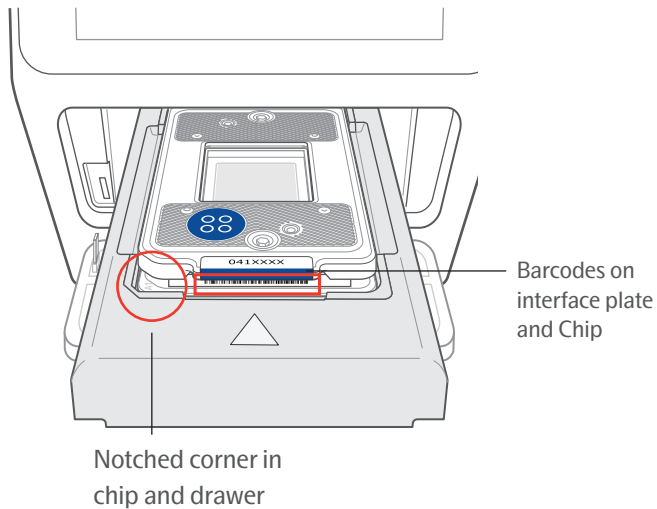
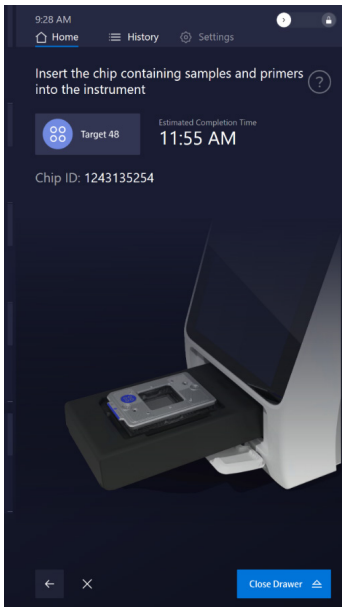
1. If required, login to the Olink Signature Q100 instrument.
2. On the **Pipette samples and primers onto the chip** screen, tap **Open Drawer**.





**NOTE:** Olink Target 48 chip screen shown.

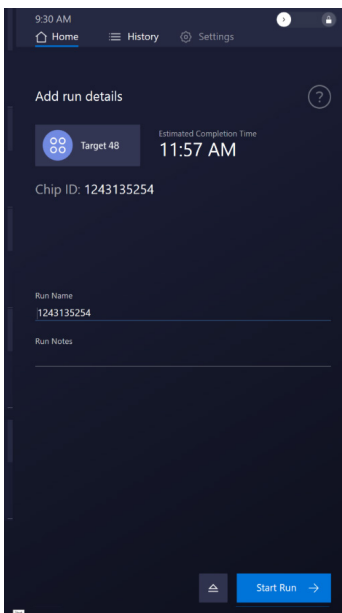
3. Make sure that the Interface plate is placed properly on the chip and in level with the drawer. Align the notched corner of the chip with the notch on the drawer and face the barcoded edges of the chip and interface plate forward.

 **NOTE:** Make sure that the protective film has been removed.





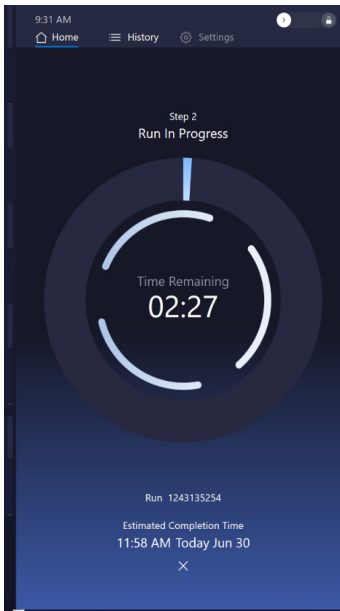
4. Tap **Close Drawer**. The system scans the chip and interface plate barcodes, then closes the drawer.
5. On the Add run details screen, confirm the Chip ID, then enter any of the following details for the run:
  - Run Name (the default name is the Chip ID). Max number of characters is 100
  - Run Notes

 **NOTE:** If you need to eject the chip, tap  (Eject) at the bottom of the screen. The software returns to the Insert the chip containing samples and primers into the instrument screen.

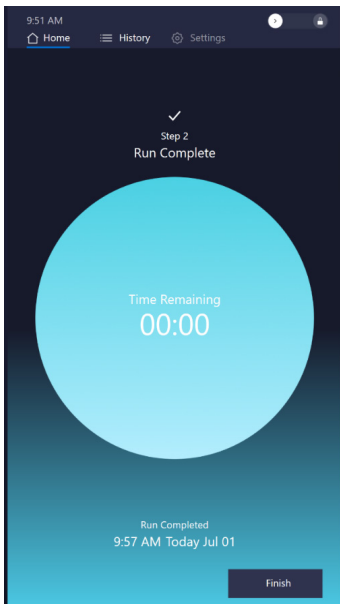


6. Tap **Start Run**. The run begins, and the screen displays the time remaining.

 **NOTE:** If you need to abort the run, tap  (Abort) at the bottom of the screen. See “5.8 Abort a Run in Progress” for more information.



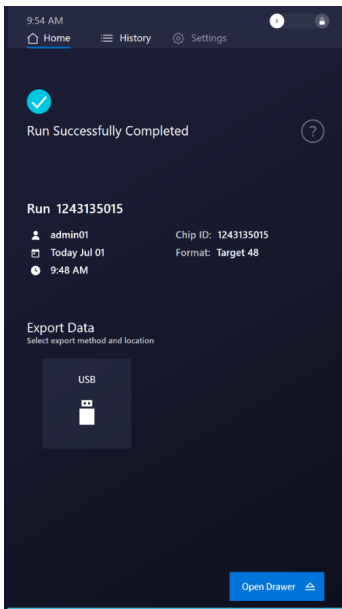
7. When the run is complete, tap **Finish**.



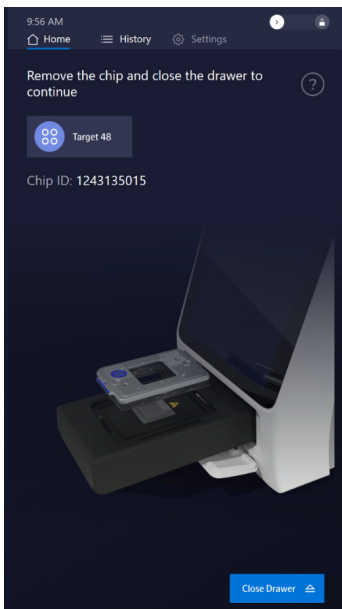
8. (Optional) Export your data:

- a. Insert a USB drive into the USB port on the front of the instrument.
- b. On the **Run Successfully Completed** screen, tap  (Export Data) to copy the run data to the USB drive.

 **NOTE:** You can export the data files later from the History screen. See “3.1.5 View Run Logs and Export Data” for more information.




9. Tap **Open Drawer**, then remove the chip and interface plate from the instrument.



10. Tap **Close Drawer**.

11. Return the interface plate to the storage container. Discard the used chip.

12. Analyze the exported data using the NPX Signature software.

 **NOTE:** You can export data onto a USB drive or access it using ethernet (see [“2.7 Ethernet Option”](#)).

## 4.3 Olink Focus Workflow with the 24.192 chip

 **NOTE:** Prepare your primers and samples as described in the separate instructions for the specific panel.

### 4.3.1 Prepare the 24.192 chip

Before pipetting assays and samples into the 24.192 chip, prepare the chip with control line fluid.

**IMPORTANT:** When injecting control line fluid:

- Follow the best practices for handling chips and control line fluid, see “3.3.1 Chip and Control Line Fluid Handling”.
- Only use an Olink Control Line Fluid for a 24.192 chip syringe. Control line fluid syringes are prefilled according to a specific chip type.

1. Remove the control line fluid syringe from the packaging and the chip from the box and foil envelope.

**IMPORTANT:** Do not evacuate air from the syringe before injecting control line fluid (Step 4).

Optional step to ensure proper chip function:

2. Actuate the top check valve:
- a. Place the chip on a flat surface.
  - b. Use the syringe with the shipping cap to actuate the check valve in the top accumulator with gentle pressure. Ensure that the poppet can move freely up and down (Figure 11).

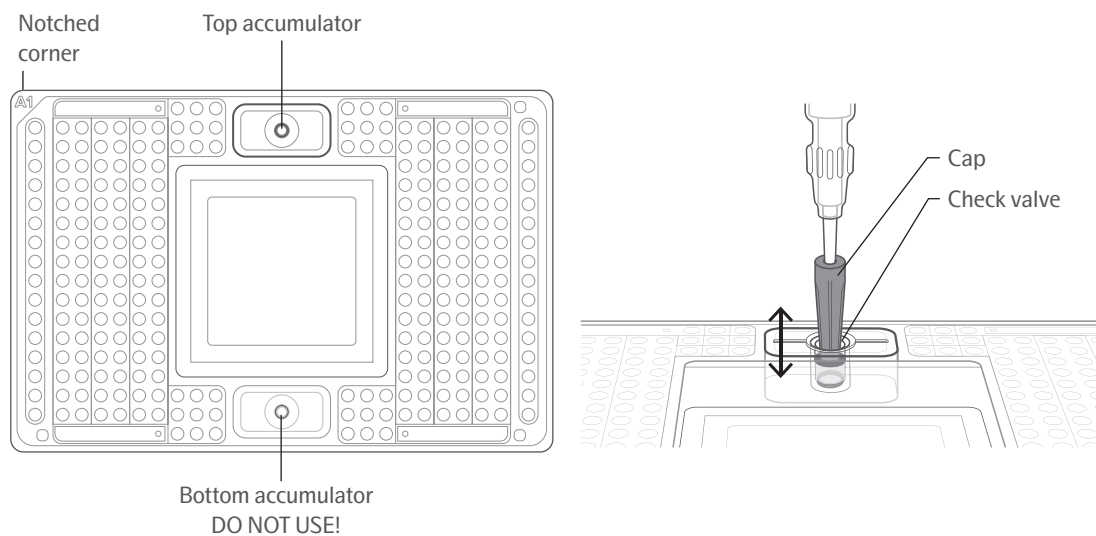


Figure 11. Actuating the check valve in the top accumulator on the 24.192 chip

3. Hold the syringe firmly in 1 hand with the tip facing up and away from the chip, pull back on the plunger slightly to create negative pressure, and remove the shipping cap with the other hand. Be careful when removing the syringe cap of the control line fluid to prevent drips.
4. Holding the chip at a 45° angle, insert the syringe tip into the top accumulator (Figure 12).

**IMPORTANT:**

- Avoid bending the syringe tip. Be careful when removing the syringe cap to prevent drips.
- Avoid getting control line fluid on the exterior of the chip or in the inlets because this makes the chip unusable. If this occurs, use a new chip.

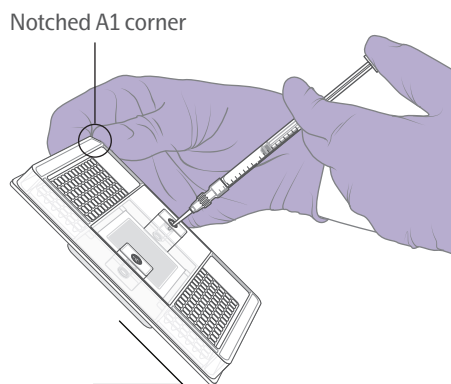


Figure 12. Inserting the syringe into the accumulator. Note the position of the notched A1 corner.

5. Use the syringe tip to press down gently on the black O-ring to move it (Figure 13). Visually confirm that the O-ring has moved.

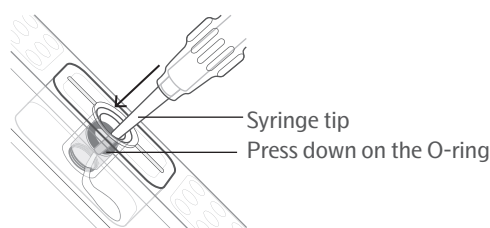


Figure 13. Injecting control line fluid into the chip

6. Release the control line fluid:
  - a. Press the syringe plunger to release the control line fluid into the accumulator while maintaining the 45° angle to allow the liquid to flow away from the O-ring.
  - b. Slowly inject the control line fluid by pushing down on the syringe plunger. The control line fluid flows into the accumulator through the open check valve. Use the entire contents of the syringe.
  - c. After fully depressing the plunger, wait approximately 5 sec before withdrawing the syringe. Before removing the syringe from the accumulator, ensure that all the control line fluid and air are purged from the syringe. This is to avoid dripping fluid on the chip surface. Residual control line fluid or air in the pipette tip is normal.
7. Make sure that the O-ring returns to its normal position after the syringe is removed.
8. Pull the protective film down and away from the bottom of the chip. Discard the film.

#### 4.3.2 Pipet Primers, Samples, and Control Reagents into the 24.192 chip

##### **IMPORTANT:**

- **Vortex all primers, samples, and control reagents thoroughly, then centrifuge them to collect contents before removing the plate seals and pipetting the mixes into the chip inlets. Failure to do so may result in a decrease in data quality.**
- **While pipetting, do not go past the first stop on the pipette. Doing so may introduce airbubbles into inlets.**
- **Follow the best practices for preventing bubbles, see “3.3.2 Bubble Prevention”.**

Refer to Figure 14 when pipetting the final sample and primer mixes and Figure 15 when pipetting the control reagents (Actuation Fluid, Pressure Fluid) into the chip. Note the orientation of the A1 corner. The barcoded edge is on the left side.

**NOTE:** Olink recommends using the reverse pipetting method when pipetting the sample and primer mixes. See the Olink® Target 96 User Manual (Olink 0935) or the Olink® Target 48 User Manual (Olink 1141).

1. Pipet 3 µL of each sample mix into the respective sample inlets on the chip.

2. Pipet 3  $\mu$ L of each primer mix into the respective primer inlets on the chip.
3. Pipet 150  $\mu$ L of Actuation Fluid (100-6250) into the P1 reservoir (■) on the chip.
4. Pipet 150  $\mu$ L of Pressure Fluid (100-6249) into each of the P2 and P3 reservoirs (■) on the chip.
5. Pipet 20  $\mu$ L of Pressure Fluid into each of the P4 and P5 inlets (■) on the chip.
6. Place the Olink Signature Q100 Interface Plate (24.192) over the chip, aligning the barcoded edges.
7. Use clear tape to remove any dust particles or debris from the chip surface, if necessary.

**IMPORTANT:** Run the chip on Olink Signature Q100 within 60 min of pipetting the samples, primers, and fluids.

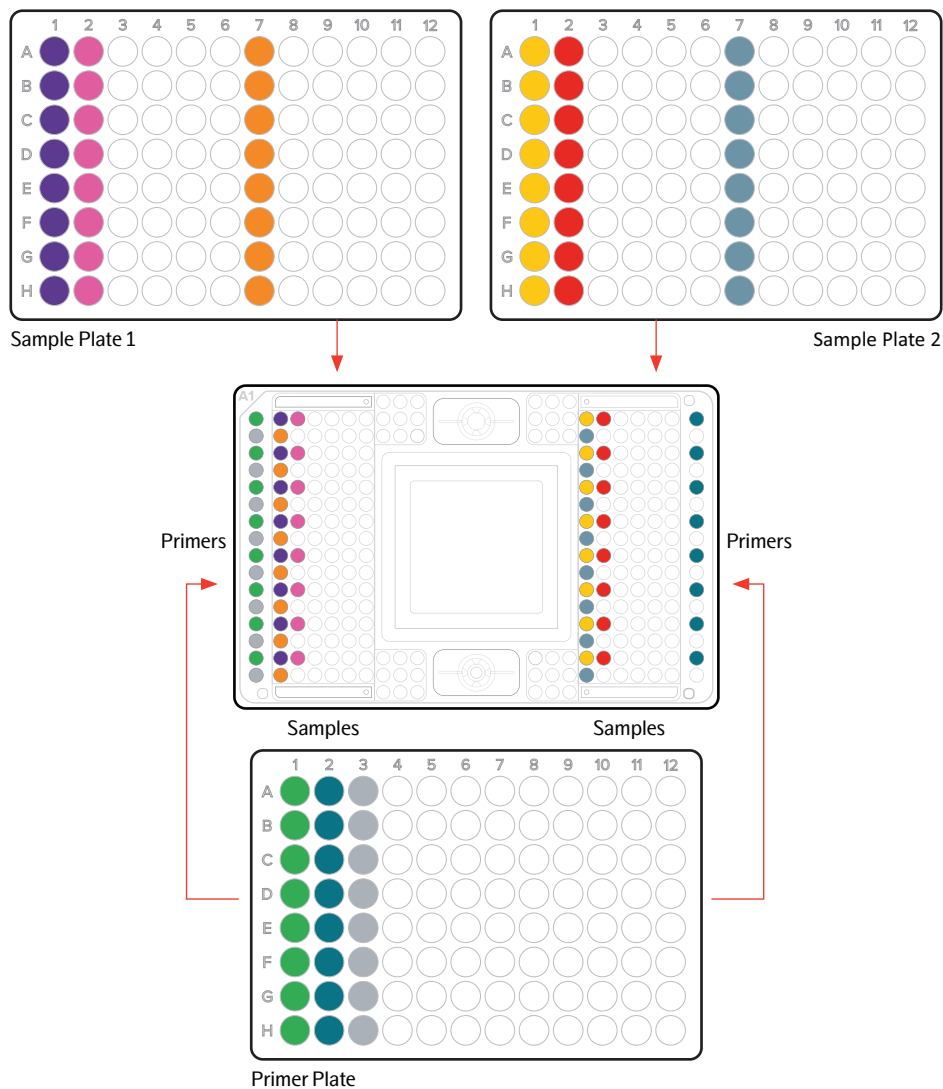


Figure 14. Primer and sample pipetting map for the 24.192 chip

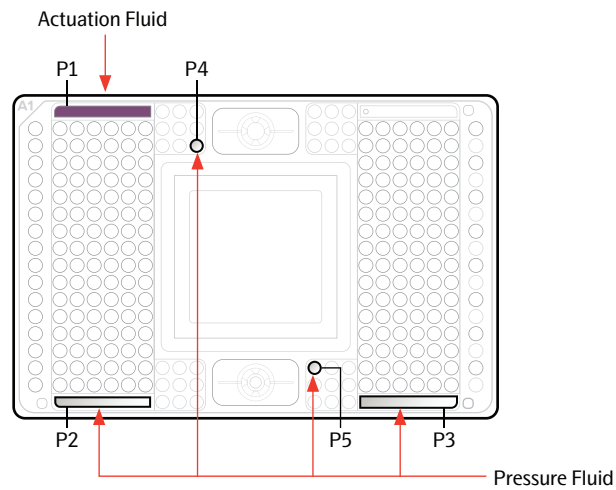

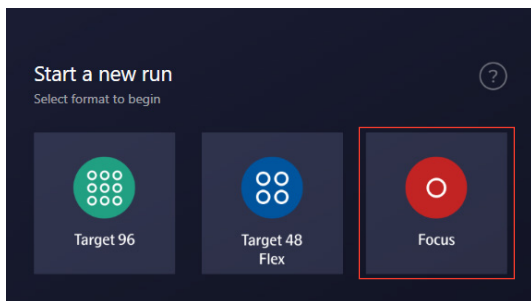


Figure 15. Control reagents pipetting map for the 24.192 chip

### 4.3.3 Run the 24.192 chip on Olink Signature Q100

 **NOTE:** If you see the Lock icon, swipe it to unlock the system.

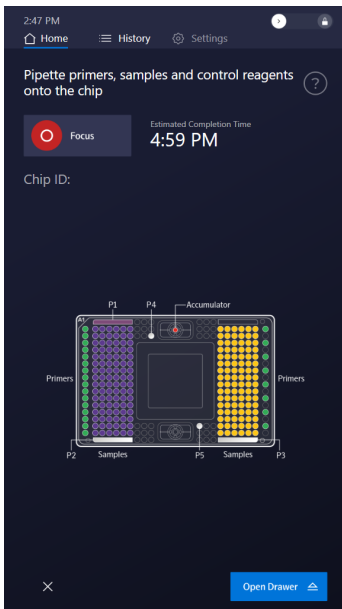
1. If required, log in to the Olink Signature Q100 instrument.
2. On the **Start a New Run** screen, tap **Focus**.



 **NOTE:** For more information about the task displayed on the screen, tap .

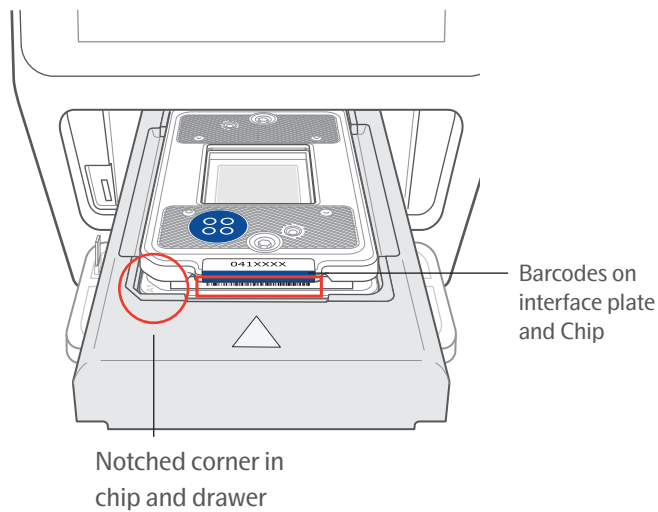
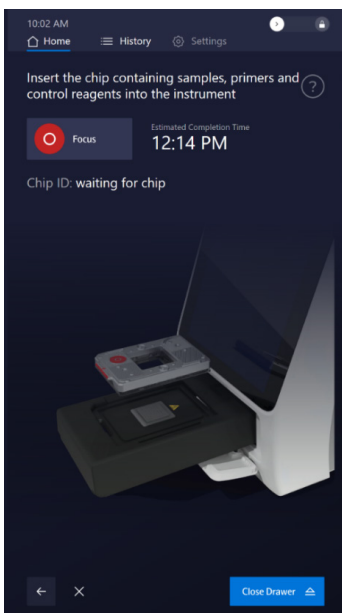
3. On the **Pipette samples, primers, and control reagents onto the chip** screen, tap **Open Drawer**.







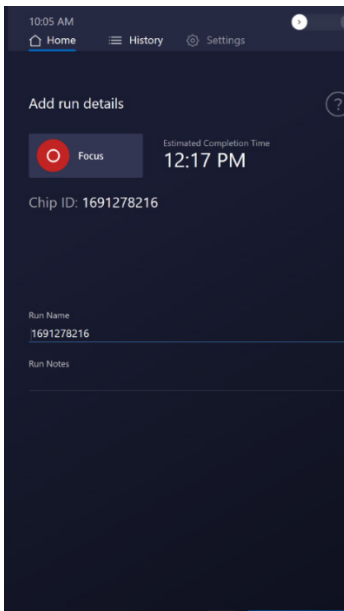
4. Make sure that the Interface plate is placed properly on the chip and in level with the drawer. Align the notched corner of the chip to the notch on the drawer and face the barcoded edges of the chip and interface plate forward.

 **NOTE:** Make sure that the protective film has been removed.





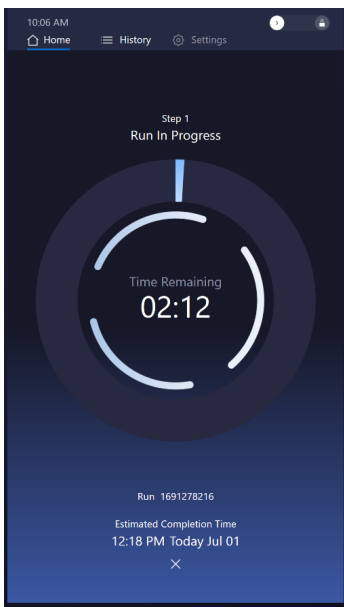
5. Tap **Close Drawer**. The system scans the chip barcode, then closes the drawer.
6. On the **Add run details** screen, confirm the Chip ID, then enter any of the following details for the run:
  - Run Name (the default name is the Chip ID). Max number of characters is 100.
  - Run Notes

 **NOTE:** If you need to eject the chip, tap  (Eject) on the Add run details screen. The software returns to the Insert the chip containing samples, primers and, control reagents into the instrument screen.

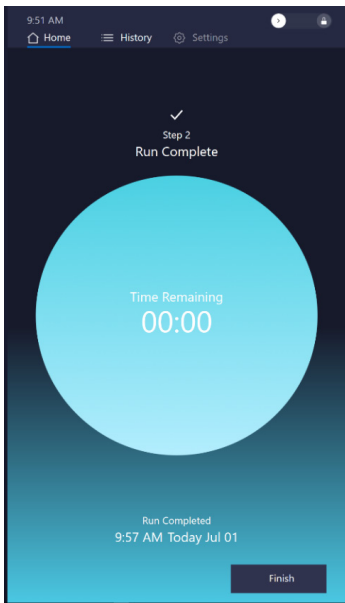


7. Tap **Start Run**. The run begins, and the screen displays the time remaining.

 **NOTE:** If you need to abort the run, tap  (Abort) at the bottom of the screen. See “5.8 Abort a Run in Progress” for more information.



8. When the run is complete, tap **Finish**.

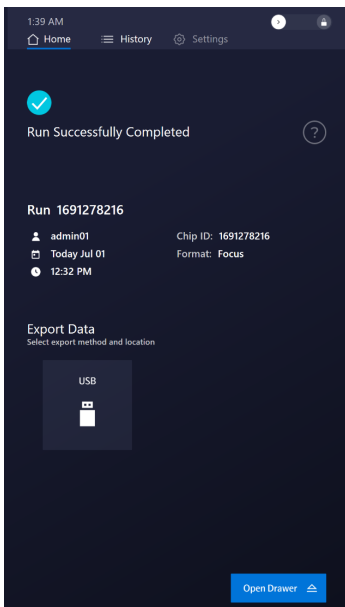


9. (Optional) Export your data:

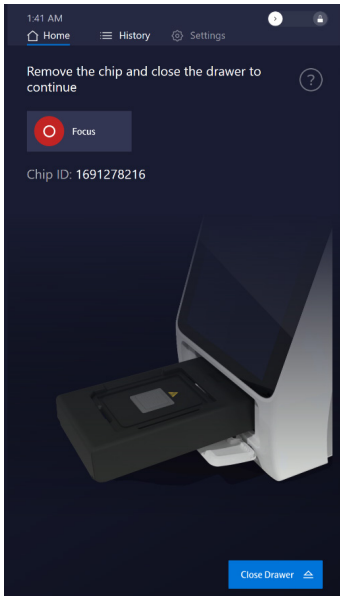
- a. Insert a USB drive into the USB port on the front of the instrument.
- b. On the **Run Successfully Completed** screen, tap  (Export Data) to copy the run data to the USB drive.



**NOTE:** You can export the data files later in the History screen. See [“3.1.5 View Run Logs and Export Data”](#) for more information.



10. Tap **Open Drawer**, then remove the chip and interface plate from the instrument.



11. Tap **Close Drawer**.

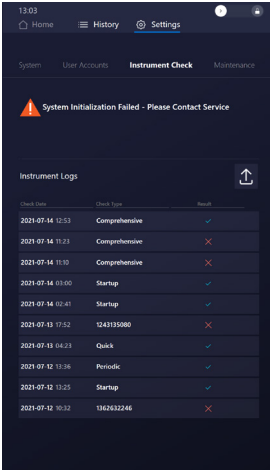
12. Return the interface plate to the storage container. Discard the used chip.

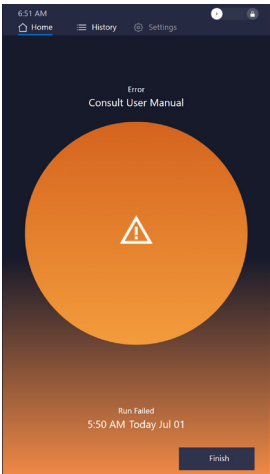
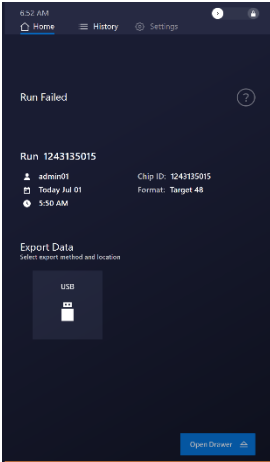
13. Analyze the exported data using the NPX Signature software.



**NOTE:** You can export data onto a USB drive or access it using ethernet (see [“2.7 Ethernet Option”](#)).

# 5. Troubleshooting

Observation	Possible Cause	Recommended Action
The system failed to power on.	No AC power.	<p>Confirm that the power cable is connected correctly to the power socket and the instrument.</p> <p>Confirm that the power socket has power.</p> <p>Confirm that the toggle switch at the rear of the instrument is in the ON position.</p>
<p>Initialization error.</p> 	Error during system self-check.	<p>Restart the system by turning off the power switch at the rear of the instrument, wait for at least 15 seconds, and then turning it on again.</p> <p>If the system fails to recover, contact Olink® Technical Support.</p>
No or low vacuum.	Dust on the bottom of the chip or the top of the thermal chuck.	<p>Confirm that the protective film was removed from the chip prior to loading on the tray.</p> <p>Clean the thermal chuck using a lint-free cloth or swabs and 70% ethanol or 70% isopropyl alcohol. See <a href="#">“6.1.2 Clean the Thermal Cycler Chuck”</a> for detailed instructions.</p> <p>Sometimes, it also helps to use clear tape to remove dust from the thermal chuck.</p> <p>Clean the bottom of the chip using a lint-free cloth and 70% ethanol or 70% isopropyl alcohol.</p> <p>After cleaning the thermal chuck and chip, retry loading into the system. If the system is still giving an Insufficient vacuum error, contact Olink Technical Support.</p>
No or low vacuum.	Blocked port(s) of the interface plate.	Clean the <b>Interface plate</b> to remove dust, see <a href="#">“6.1.3 Clean the Interface Plate”</a> .

Observation	Possible Cause	Recommended Action
<p>Run failure.</p>  	<p>Various.</p>	<p>Run a comprehensive instrument check (see “5.1 Run Instrument Checks”), then contact Olink® Technical Support.</p>
<p>Instrument is in Demo mode.</p>	<p>The instrument was left in Demonstration mode by mistake.</p>	<p>Contact Olink® Technical Support to change the instrument back into Run mode.</p>
<p>Chip scan error.</p>	<p>Chip was loaded without its Interface plate on.</p>	<p>Repeat loading with correct Interface plate on top of the chip.</p>
<p>Drawer can not close properly and makes noise.</p>	<p>Interface plate was not placed properly on the chip.</p>	<p>Pull out the drawer and repeat loading with Interface plate properly on top of the chip.</p>

## 5.1 Run Instrument Checks

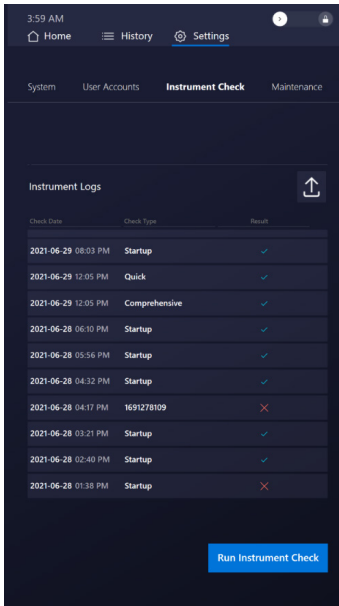
You can run two types of instrument checks:

- **Comprehensive:** Checks all components to make sure everything is working correctly (for example, opens and closes valves, raises and lowers the camera, etc.). The comprehensive check takes 8–10 min to complete.
- **Quick:** Checks that all components are connected and communicating properly. The quick check takes 5–8 min to complete.

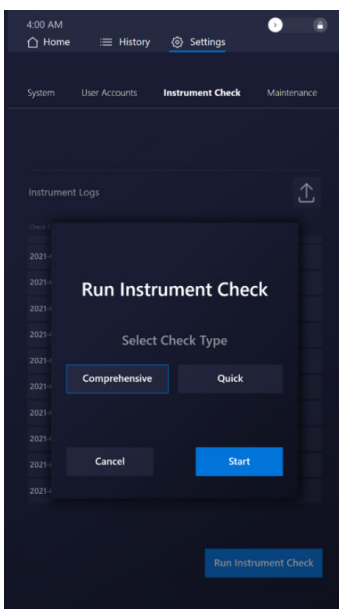


**NOTE:** *If a chip is located in the instrument, it is not possible to execute the "Run Instrument Checks". Remove the chip before starting the check*

1. On the touchscreen, tap **Settings > Instrument Check**.

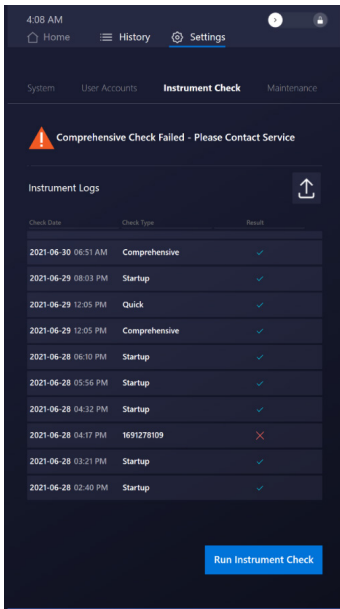


2. Tap **Run Instrument Check**.
3. In the **Run Instrument Check** window, tap the type of check you want to run.




4. Tap **Start**. When the test is complete, the new log file appears in the Instrument Logs list.

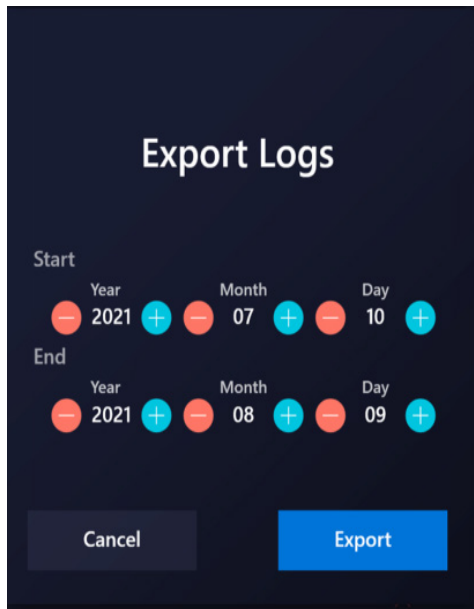
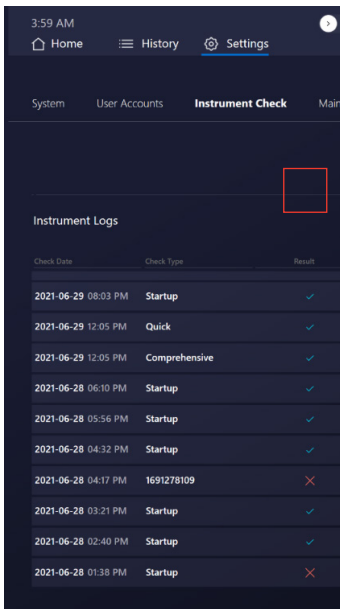
If the Instrument check fails, contact Olink® Technical Support.



## 5.2 Export Instrument Check Logs

If Technical Support requests the instrument check logs, export the logs as follows:

1. Insert a USB drive into the USB port on the front of the instrument.
2. Tap , select the date range for the logs you want to export, then click **Export**.



The logs are exported to the USB drive in a .blmg folder. A Success message is displayed when the export is complete.

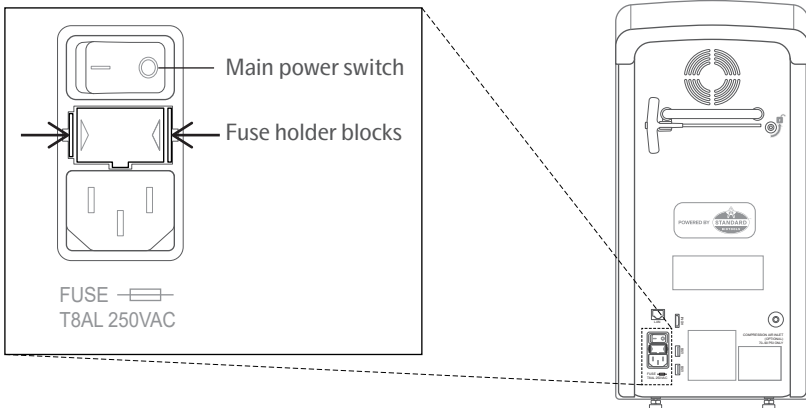
3. Send the .blmg folder to Technical Support, as requested.

## 5.3 Replace the Fuse

No fuse replacement is required during installation. If the power fuse is faulty, then replace the fuse:



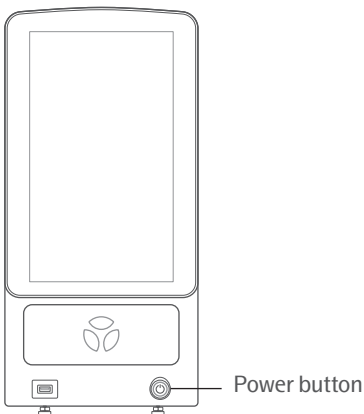
1. Toggle off the main power switch on the rear of the instrument, then unplug the power cord from the instrument.
2. Remove the fuse holder below the main power switch by pushing and releasing the fuse holder blocks.



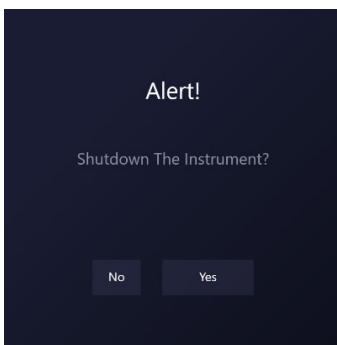
3. Replace the fuse (T8AL, 250 V AC, 5 × 20 mm) and reinstall the fuse holder. Follow the arrow marks in the fuse holder to match the casing.
4. Plug the power cord into the instrument, then toggle on the main power switch.

## 5.4 Shut Down the System


If you need to shut down the system due to an unrecoverable error, use the instrument's power button on the front. If that doesn't work, disconnect the main power cord to cut the power.

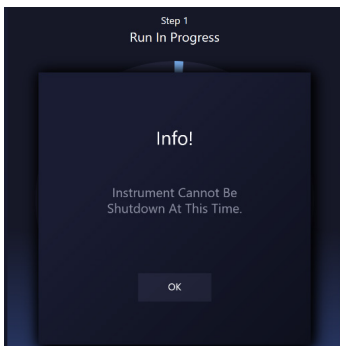


1. Gently press and hold the power button until the touchscreen displays the following message:



2. Tap **Yes, continue** to proceed with system shutdown.

 **NOTE:** If a run is in progress, the screen displays a message:



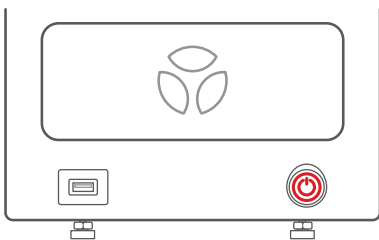
You can either abort the run and shut down or wait until the run is complete before trying to power down the system again

3. Wait 10 sec. The screen goes dark, and the power button becomes red.

**IMPORTANT:** *Wait at least 15 sec after shutting down the instrument before turning it back on.*

## 5.5 Start Up the System

When the power button on the front of the instrument is red, gently press it to start up the system.



During startup, the instrument initializes all system components and software. It also performs a set of instrument checks to ensure that the system components are working correctly. Initialization and the instrument checks take approximately 10 min to complete. Export the results from the Instrument Check screen under Settings (see “5.1 Run Instrument Checks” for more information). The system can remain turned on when not in use.

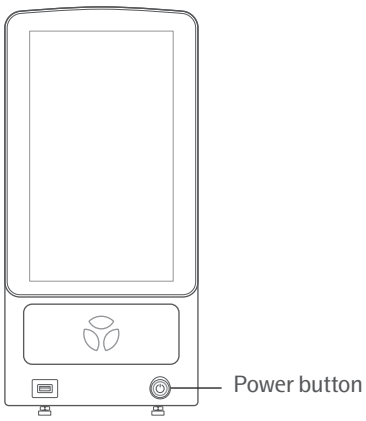
**NOTE:** *If not planned to be used, e.g., for a week, turn off Olink® Signature Q100 to save power.*

## 5.6 Shut Down and Turn Off the System

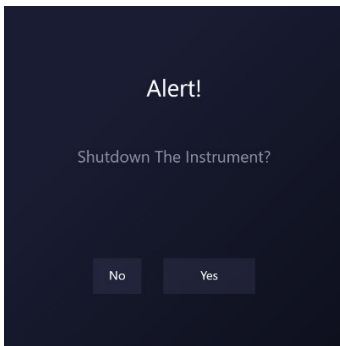
Shut down and turn off the system completely before unplugging it or moving it. It takes approximately 1 min for the system to shut down.

**IMPORTANT:** *Do not toggle off the main power switch without first shutting down the system.*

1. Shut down the system using the power button on the front of the instrument.

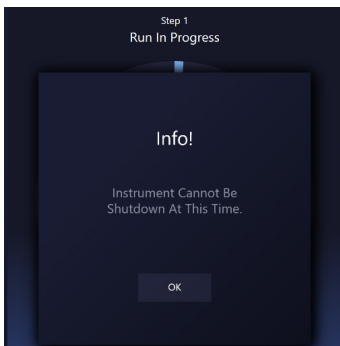



- a. Gently press and hold the power button until the touchscreen screen displays the following message:



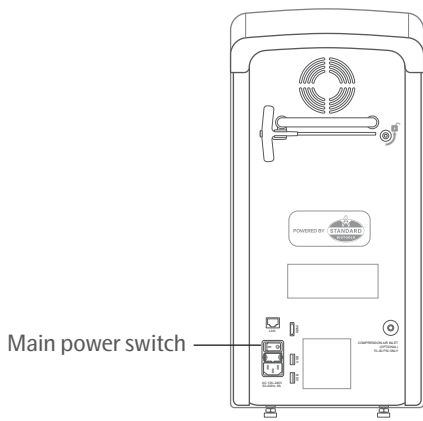
- b. Tap **Yes, continue** to proceed with system shutdown.

 **NOTE:** *If a run is in progress, the screen displays a message:*



 **NOTE:** *You can either abort the run and shut down or wait until the run is complete before trying to power down the system again.*

- c. Wait 10 sec while the screen goes dark. The power button becomes red.
2. Toggle off the main power switch on the rear panel of the instrument.



**IMPORTANT:** Wait at least 15 sec after turning off the instrument before turning it back on.

## 5.7 Turn On and Start-Up the System

When the system is turned off, turn it on by toggling on ( | ) the main power switch on the instrument's rear panel.

The system starts up, and the instrument initializes all system components and software. It also performs a set of instrument checks to ensure that the system components are working correctly. The system can remain turned on when not in use.

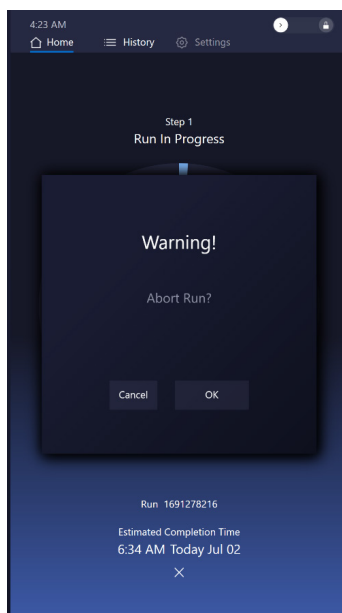
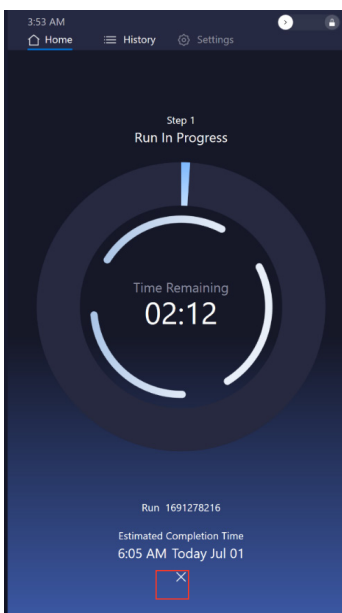
**NOTE:** If not planned to be used, e.g., for a week, turn off Olink® Signature Q100 to save power.

## 5.8 Abort a Run in Progress

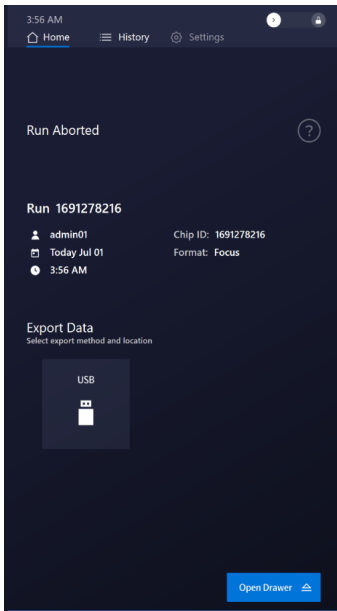
**IMPORTANT:** Aborted runs cannot be restarted. Discard any chips from aborted runs.

If you need to abort a run in progress:

1. Tap **✕** (Abort) at the bottom of the screen, then tap **OK** to end the run in progress.



2. Tap **Open Drawer**, then remove the chip and interface plate.



3. Tap **Close Drawer** to return to the Home screen.

## 5.9 Idle mode

The instrument goes into idle mode automatically when there is no user interaction for a long while. Touch the screen to take the instrument out of its idle mode.

# 6. Preventive Maintenance, Decontamination, and Disposal

## 6.1 Preventive Maintenance

Before using a cleaning or decontamination method other than those recommended by Olink, verify with Olink Technical Support that the proposed method will not damage the equipment.

This section describes how to clean and maintain your Olink Signature Q100 system for optimal performance.

### 6.1.1 Preventive Maintenance Recommendations

For optimal performance of your Olink Signature Q100 system, we recommend:

- Performing annual maintenance by a certified Olink service engineer.
- Ordering a replacement interface plate from Olink when the plate approaches its life expectancy of 2,000 runs.
- Only using replacement parts supplied by Olink.

### 6.1.2 Clean the Thermal Cycler Chuck

When instrument is in use, we recommend cleaning the thermal cycler chuck once a day.

1. Wait at least 5 minutes to allow the system to cool down after a completed run.



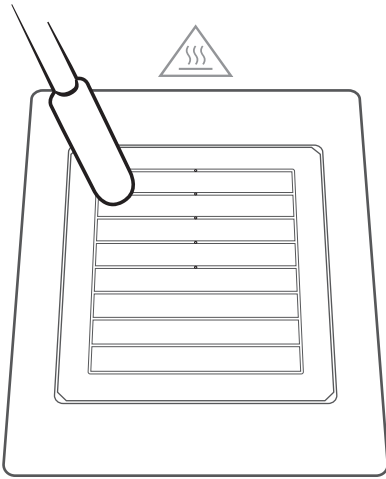
**CAUTION: HOT SURFACE HAZARD.** The thermal cycler chuck gets hot and can burn your skin. Use caution when working near the chuck.

2. Tap **Open Drawer**.
3. Remove the chip and interface plate from the drawer. Store the interface plate and discard the used chip.
4. Moisten a lint-free cloth or soak lint-free swabs with 70% ethanol or 70% isopropyl alcohol.



**WARNING: BIOHAZARD.** If you are putting biohazardous material on the instrument, use appropriate personal protective equipment and adhere to Biosafety in Microbiological and Biomedical Laboratories (BMBL), a publication from the Centers for Disease Control and Prevention, and to your lab's safety protocol to limit biohazard risks. If biohazardous materials are used, then label the equipment properly as a biohazard. For more information, see the BMBL guidelines online at [cdc.gov/biosafety/publications/index.htm](https://www.cdc.gov/biosafety/publications/index.htm).

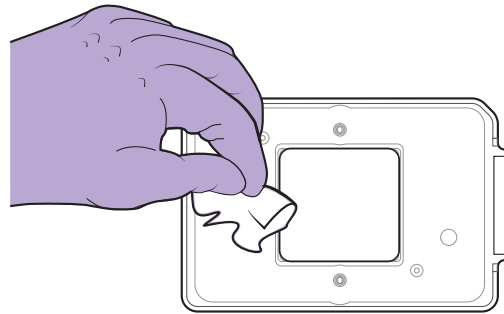
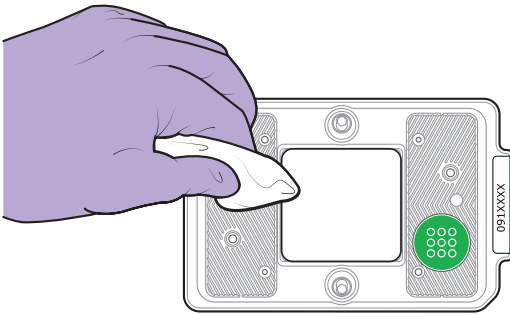
5. With the cloth or swabs, remove debris from the thermal cycler chuck by gently wiping towards the vacuum holes according to the pattern of the chuck. Next, wipe along the perimeter of the chuck:



### 6.1.3 Clean the Interface Plate

We recommend visually checking the interface plate after each run. If dust particles or debris has accumulated, clean the interface plate as follows:

1. Use a lint-free cloth and 70% ethanol or 70% isopropyl alcohol to gently wipe the bottom and top of the interface plate to remove any debris:



2. Store the interface plate in the storage container.



**NOTE:** If there is a sign of tears in the surface of the silicone surface it may need to be replaced, see "[6.1.1 Preventive Maintenance Recommendations](#)".

### 6.1.4 Clean the Instrument and Touchscreen

- Use a lint-free cloth and 70% ethanol or 70% isopropyl alcohol to gently wipe the top of the instrument drawer and the instrument covers as needed.
- Wipe down the touchscreen with a lint-free cloth as needed.




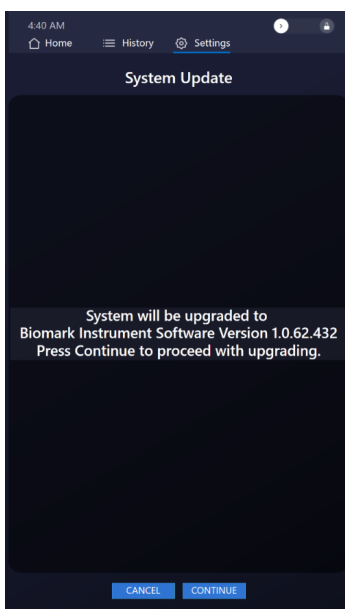
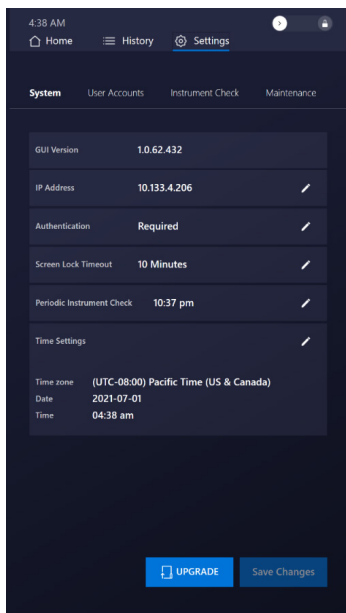
#### **IMPORTANT:**

- **Do not spray cleaning solution directly on the instrument or touchscreen, as it may penetrate the seams around the screen and cause damage. Spray the cleaning solution on a lint-free cloth and then gently wipe the instrument surface.**
- **Do not use bleach to clean the instrument as it is corrosive to metal.**
- **Before using a cleaning or decontamination method other than those recommended by Olink®, verify with Olink Technical Support that the proposed method will not damage the equipment.**

## 6.1.5 Update the Software

1. Obtain the software installer (.pak file).
2. Extract the files to your local computer, then copy the .pak file to a USB drive (ensure that the .pak file is the only file on the USB drive and that it is not placed in a folder).
3. Turn off Olink Signature Q100, and insert the USB drive into the USB port on the front of the instrument. Turn on the instrument.
4. On the instrument, go to the **Settings** screen, then tap **UPGRADE**.

 **NOTE:** The Upgrade button is visible only if a USB drive containing the .pak file is inserted in the instrument.



5. Follow the prompts to complete the software update.

## 6.2 Decontamination and Disposal



**WARNING: BIOHAZARD.** When handling biohazardous materials or using biohazardous material on the instrument or system, use appropriate personal protective equipment. Adhere to Biosafety in Microbiological and Biomedical Laboratories (BMBL), a publication from the Centers for Disease Control and Prevention, and your lab's safety protocol to limit biohazard risks. If biohazardous materials are used, label the equipment properly as a biohazard. For more information, see the BMBL guidelines online at [cdc.gov/biosafety/publications/index.htm](https://www.cdc.gov/biosafety/publications/index.htm).

Ensure that the Olink Signature Q100 system is cleaned or decontaminated before servicing the equipment, removing it from use, or transporting it for disposal. Refer to the instructions contained in this document and use only those materials specified.

### 6.2.1 Biological Agents

1. Using a soft cloth, apply 70% ethyl alcohol or 70% isopropyl alcohol to all accessible surfaces.
2. Keep surfaces wet for at least 5 min and then wipe dry.
3. Repeat Steps 1 and 2 once.



4. Clean all decontaminated surfaces with a wet cloth to remove residual alcohol and wipe dry.

## 6.2.2 Hazardous Chemicals

**IMPORTANT:** Before use, ensure that alcohol is compatible with the chemicals used.

1. Using a soft cloth, apply 70% ethyl alcohol or 70% isopropyl alcohol to all accessible surfaces.
2. Keep surfaces wet for at least 5 min and then wipe dry.
3. Repeat Steps 1 and 2 once.
4. Clean all decontaminated surfaces with a wet cloth to remove residual alcohol and wipe dry.

## 6.2.3 Disposal of Products

Used chips and reagents should be handled and disposed of following federal, state, regional, and local laws for hazardous waste management and disposal.

Do not dispose of this product in unsorted municipal waste. This equipment may contain hazardous substances that could affect health and the environment. Use appropriate take-back systems when disposing of materials and equipment.



Learn more at [olink.com](https://olink.com).

# 7. Technical support

For technical support contact [support@olink.com](mailto:support@olink.com).

# 8. Revision history

Version	Date	Description
1.2	2022-12-06	Replaced footer. Replaced illustration in section <a href="#">4.3.3</a> , step 3. Added text to <a href="#">2.7</a> Replaced all illustrations showing the rear of the instrument. Updated <a href="#">10.2</a> . Editorial changes.
1.1	2022-01-25	Added text to <a href="#">2.7</a> Editorial changes.
1.0	2021-11-11	New

# 9. Appendix: Related Documents

Go to <https://www.olin.com/resources-support/document-download-center/> to download these related documents.

Title	Document Number
Olink® Target 96 User Manual	0935
Olink® Target 48 User Manual	1141
Olink® Signature Q100 Site Requirements Guide	1170
Olink® NPX Signature User Manual	1173
Olink® Signature Q100 Installation Guide	1171
Olink® Signature Q100 - A benchtop system for protein biomarker analysis	1164

# 10. Appendix: Safety

## 10.1 General Safety

In addition to your site-specific safety requirements, Olink recommends the following general safety guidelines in all laboratory and manufacturing areas:

- Use the appropriate personal protective equipment (PPE): safety glasses, fully enclosed shoes, lab coats, and gloves, according to your laboratory safety practices.
- Know the locations of all safety equipment (fire extinguishers, spill kits, eyewashes/ showers, first-aid kits, safety data sheets, etc.), emergency exit locations, and emergency/injury reporting procedures.
- Do not eat, drink, or smoke in lab areas.
- Maintain clean work areas.
- Wash hands before leaving the lab.
- Notify Olink before servicing if biohazardous or radioactive materials are used on the instrument.

## 10.2 Instrument Safety

The system should be serviced by authorized personnel only.



**WARNING:** Do not modify this instrument or system. Unauthorized modifications may create a safety hazard.



**WARNING:** POTENTIAL BIOHAZARD. When handling biohazardous materials or using biohazardous material on the instrument, use appropriate personal protective equipment. Adhere to Biosafety in Microbiological and Biomedical Laboratories (BMBL), a publication from the Centers for Disease Control and Prevention, and your lab's safety protocol to limit biohazard risks. If biohazardous materials are used, label the equipment properly as a biohazard. For more information, see the BMBL guidelines online at [cdc.gov/biosafety/publications/index.htm](https://www.cdc.gov/biosafety/publications/index.htm).













**WARNING:** PHYSICAL INJURY HAZARD. Do not attempt to lift or move the instrument unless you use proper lifting techniques. The instrument weighs approximately 41.5 kg (91.5 lb). If you choose to lift or move the instrument after it has been installed, do not attempt to do so without the assistance of others. Use appropriate moving equipment and proper lifting techniques to minimize the chance of physical injury.



**CAUTION:** HOT SURFACE HAZARD. The thermal cycler chuck gets hot and can burn your skin. Use caution when working near the chuck.

## 10.2.1 Symbols on the Instrument or in This Document

The following table describes the hazard symbols used on labels on the instrument (*Figure 16*) or in this document.

Symbol	Location on Instrument	Description
	Rear of instrument	Hazard. Consult the user guide for further information.
	On the instrument drawer	Hot surface hazard. Do not touch; potential for personal injury.
	Rear of instrument	Electricity hazard. Indicates high electricity levels and a threat of electric shock from machines or equipment in the vicinity. You may suffer severe injuries or death.
	On the instrument drawer	Potential biohazard.
	Rear of instrument	Lifting hazard.
	Front of instrument	Power and standby symbol.
	Rear of instrument	The Power switch is in the Off position.
	Rear of instrument	The Power switch is in the On position.
	Inside of instrument; for service personnel only.	Protective conductor terminal (main ground). It must be connected to earth ground before any other electrical connections are made to the instrument or system.
	Rear of instrument	To minimize negative environmental impact from electronic waste disposal, do not dispose of electronic waste in unsorted municipal waste. Follow local municipal waste ordinances for proper disposal provision. Contact customer service for information about responsible disposal options.

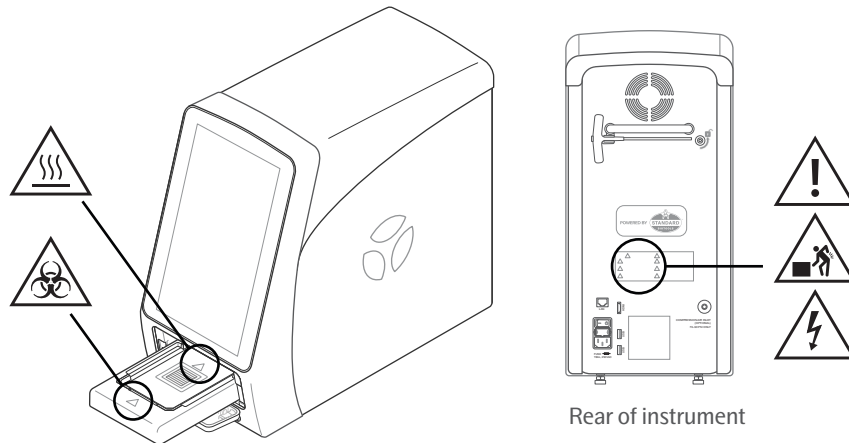


Figure 16. Safety symbols on the Signature Q100 instrument

## 10.3 Electrical Safety

**NOTE:** The main power disconnect is on the rear panel of the instrument.



**WARNING:** ELECTRICAL HAZARD. DO NOT REMOVE THE COVERS. Electrical shock can result if the system is operated without its protective covers. No internal components under the covers are serviceable by the user.



**WARNING:** ELECTRICAL HAZARD. Plug the system into a properly grounded receptacle with adequate current capacity.

## 10.4 Chemical Safety

The responsible individuals must take the necessary precautions to ensure that the surrounding workplace is safe and that system operators are not exposed to hazardous levels of toxic substances. When working with any chemicals, refer to the manufacturer or supplier's applicable safety data sheets (SDSs).



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