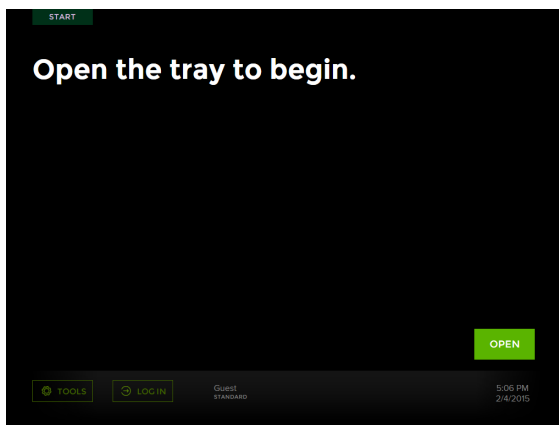


Callisto System Usage

NOTE For complete safety information and operating procedures, see the Callisto System User Guide (PN 100-7598). For detailed IFC procedures, see the Callisto Getting Started Guide (PN 100-7599). To create an experiment for Callisto, see the Callisto Experiment Planner User Guide (PN 100-8806).

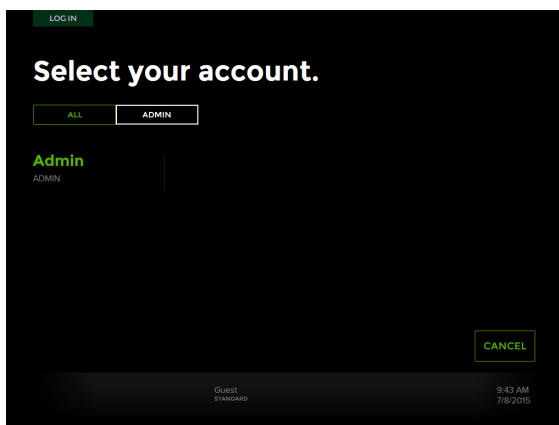
Start the Instrument

On the back of the Callisto™ instrument, turn the power switch on. (Pushing the front power button for ~2 seconds wakes up the instrument and prompts the instrument to display the shutdown menu.) After power-up and instrument initialization, the Start screen displays:



(Optional) Log In

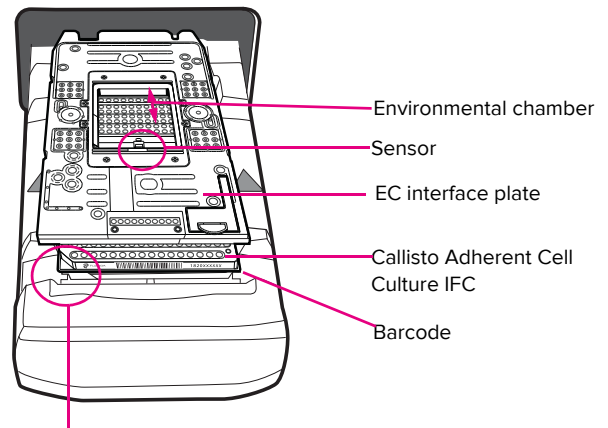
Log in as **Admin** or with a specific user account:



Prepare the IFC and Run an Experiment

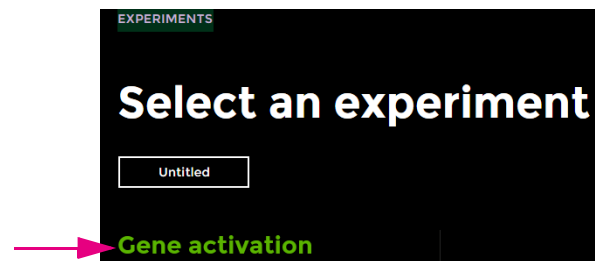
- 1 Prepare the Callisto Adherent Cell Culture IFC environmental control (EC) interface plate for loading into the instrument (See the Callisto System Getting Started Guide).
- 2 On the instrument, tap **OPEN**.

- 3 Place the IFC-EC interface plate assembly onto the tray by aligning the notched corner of the IFC with the white notch on the tray. In this position, barcode numbers on the IFC label face out:



White notch. Note: Exploded view of the IFC-EC interface plate assembly. To maintain sterility, keep the IFC and EC interface plate assembled whenever they are outside of the cell culture hood.

- 4 Tap **LOAD**. The instrument displays the IFC barcode at the bottom right of the screen.
- 5 Tap the appropriate experiment. For example:



- 6 Ensure that gas flow to the instrument is on and the tank is $\geq 1/4$ full.
- 7 Tap **RUN** and **CONFIRM**.
- 8 Over the next 3–5 minutes, ensure that the instrument has started the run, the gas is flowing, and there are no gas flow errors. Ensure that the environmental controller is connected. The display says EC ON or EC OFF on the right side of the screen, which is normal.
- 9 For every step, add cells, reagents, and media to the IFC according to instructions on the screen and in appropriate Cell Culture Worksheets. The EJECT button displays after a step is finished. Stop a step by tapping **STOP**.

- (Optional) From Experiment Planner, click **Instrument > Launch Instrument Viewer** to remotely monitor the run.

IMPORTANT

- Before coating the IFC (pre-treatment part A), install the waste sponge.
- Before running the second step to clear the IFC (pre-treatment part B), install the humidity sponge in the IFC.
- Replace the humidity sponge every 3 days and re-hydrate it every time it is out of the instrument.
- After clearing the IFC, replace the waste sponge every 3 days, as instructed, and before fixing cells.

Perform Step Operations

If You Want to...	Then
Skip step	<ol style="list-style-type: none"> 1 Tap the new step. 2 Tap YES > RUN > CONFIRM.
Abort step	Tap STOP > YES.
Eject IFC	Tap EJECT.
Modify step duration	Tap MODIFY , move slider, and then tap OK.
Pause step	<ol style="list-style-type: none"> 1 Tap PAUSE > YES. 2 Perform task. 3 Tap OPEN, return IFC. 4 Tap RESUME > YES.
Refill reagents past end time	Modify or add a step.

Modify an Experiment with a USB Drive

To modify steps remotely, see the Callisto Experiment Planner User Guide and the Callisto System User Guide.

- 1 Plug a USB drive into a USB port of Callisto.
- 2 To export the experiment file from the instrument:
 - During a run: On the bottom left of the Steps screen, tap **MANAGE** and then tap **Export Experiment**.
 - After a run: On the bottom left of the Start screen, tap **TOOLS > Manage Experiments**, and then tap **Export Experiment**. When the Export screen displays, tap the experiment to export.
- 3 Plug the USB drive into a USB port of a computer with Callisto Experiment Planner installed, and then open the execution (.iee) file.
- 4 (Optional) Click the **Execute** tab to review completed and uncompleted steps.
- 5 Click the **Summary** tab and then click **Unlock for Editing**.

- 6 Modify and validate the execution (.iee) file and save it to the USB drive.

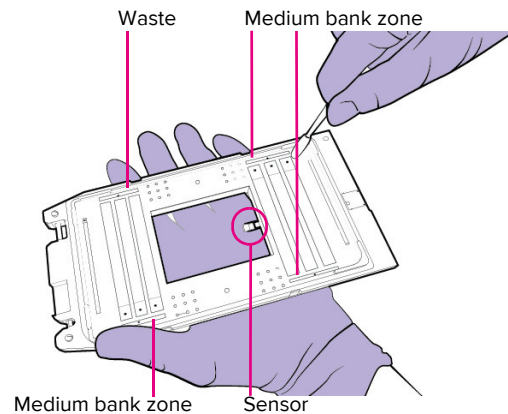
IMPORTANT If you change culture chamber replicates, you must reselect chambers to harvest cell lysates and cells. You can reassign a cell culture chamber to a different replicate chamber group until different treatments are applied to the two replicate chamber groups. You must update the original execution file in order to resume the experiment on Callisto with the modified file under the same filename.

- 7 Click the **Cell Culture Worksheets** tab, and then print and/or save the PDF of the Cell Culture Worksheets for reference.
- 8 Plug the USB drive with the modified execution (.iee) file into a USB port on Callisto.
- 9 To import the experiment file to the instrument:
 - During a run. On the Steps screen, tap **MANAGE > Import Experiment**. Select the experiment and tap **YES** to confirm importing the modified experiment.
 - After a run. On the Start screen, tap **TOOLS > Manage Experiments**, and then tap **Import Experiment**. The Manage screen displays. Tap the modified file to import it. On the Experiments screen, tap the modified experiment file. On the Experiments screen, tap the experiment to run it.

Clean the Cell Culture EC Interface Plate

- 1 Gently wipe the face of the EC interface plate (sensor pointing up) with a premoistened lint-free wipe:

IMPORTANT Do not touch the sensor.



- 2 Spray a cleaning swab with 70% ethanol or 70% isopropyl alcohol. Do not spray alcohol directly on the EC interface plate.
- 3 Gently clean the IFC-facing side of the EC interface plate (sensor pointing up) with a cleaning swab, including the medium bank zones.

For technical support visit fluidigm.com/support.

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