

## Startup

1. Open the main valve of the CO<sub>2</sub> tank (if needed) by turning it *one* round (counter-clockwise). The tank should have a pressure of ~50 bar, the pressure reducer ~1 bar.



2. Open the front door of the instrument by pulling the lock below the TFT display to the left. Check the liquid level in the humidifier, water immersion and waste bottles.



3. To replenish water in the humidifier, take out the bottle from its metal housing. Press the snaps on **connectors A and B**, and pull out the tubings. Do not disconnect the third, unlabeled connector. Replenish only ultrapure and deionized water and re-connect tubings A and B. To replenish immersion liquid and to empty the immersion waste bottle, press the metal snaps and pull out the tubings.

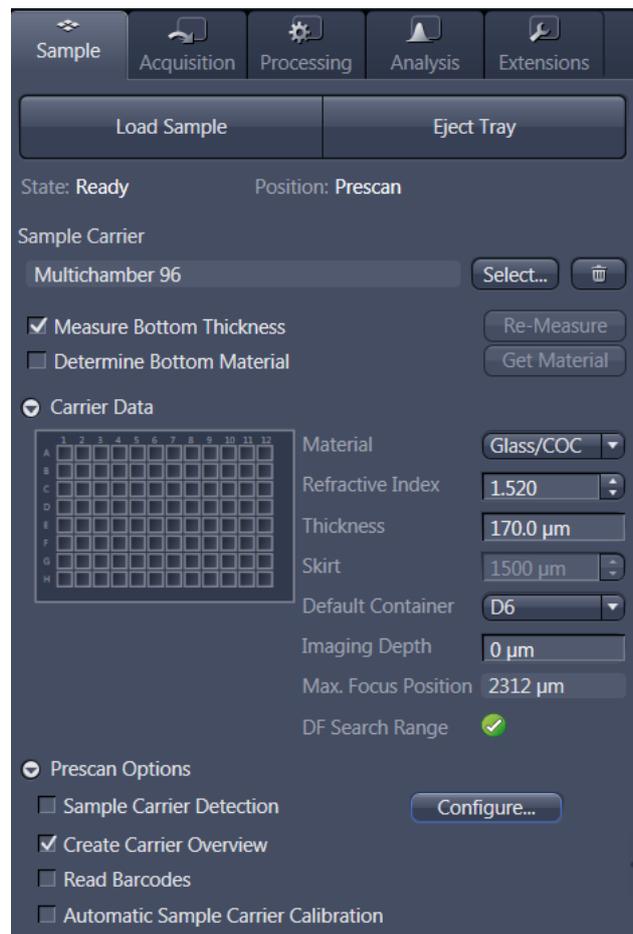


4. Activate the system by pressing the Standby button (to the left of the touch panel).
5. Power up the PC and start the ZEN software. In the "Incubation" tool (lower right corner of the workspace), check the setpoint of the temperature (default: 37°C). Activate the CO<sub>2</sub> checkbox ("CO<sub>2</sub> Small V") and set the **"Pump Level" to 1 or 2 (not more!)**. The "Auto Immersion" tool should indicate "Sufficient" for the immersion tank level.



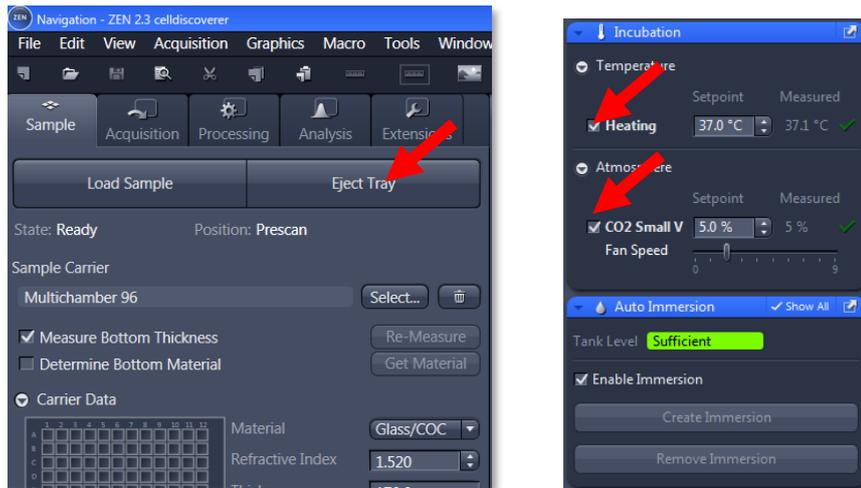
## Loading a sample

1. Activate the "Sample" tab.
2. Click "Eject Tray".
3. Mount the sample. Multiwell plates can be directly inserted into the mounting frame (position A1 is indicated on the frame). For other dishes, use appropriate inserts.
4. **Make sure that the sample is installed even and can move in XY by ~1 mm.**
5. In the "Sample" tab, select the carrier. Select "Multichamber" for multiwell plates with square wells, "Multiwell" for those with round wells.
6. **Under "Carrier Data > Default Container", select a well containing liquid (this well is used for bottom thickness and material determination).**
7. Under "Prescan Options > Default Container", uncheck "Sample Carrier Detection" and "Read Barcodes" (slow and unreliable functions).
8. Click "Load Sample".

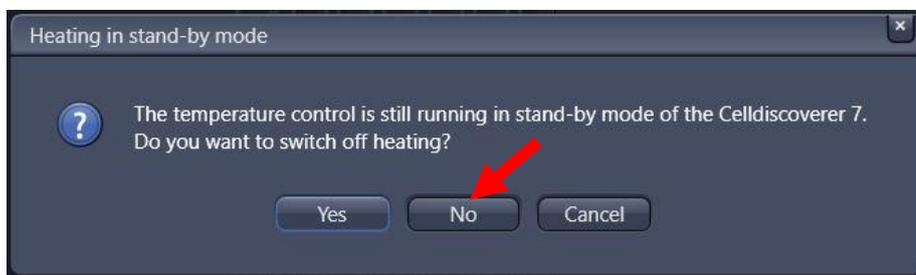


## Shutdown

1. Activate the "Sample" tab, click "Eject Tray". Remove your sample.
2. In the "Incubation" tool, uncheck "CO2 Small V". **Leave "Heating" checked and at 37°C.**



3. Exit ZEN. A dialog will pop, asking to switch off the heating. **Click "No" (i.e., do not turn it off).**



4. Shut down the PC
3. Close the main valve of the CO<sub>2</sub> tank (clockwise).
4. On the touch panel of the instrument, hit "Load Sample" (to close the unit).
5. Press the "Standby" button to the left of the display. The tray will move into the unit.

