LSM710 Live Cell Turn On/Turn Off Instructions

Kim Peifley

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It should take 1-2 hours for conditions inside the live cell chamber to stabilize. This time plus set up time should be factored in to your scheduled time.

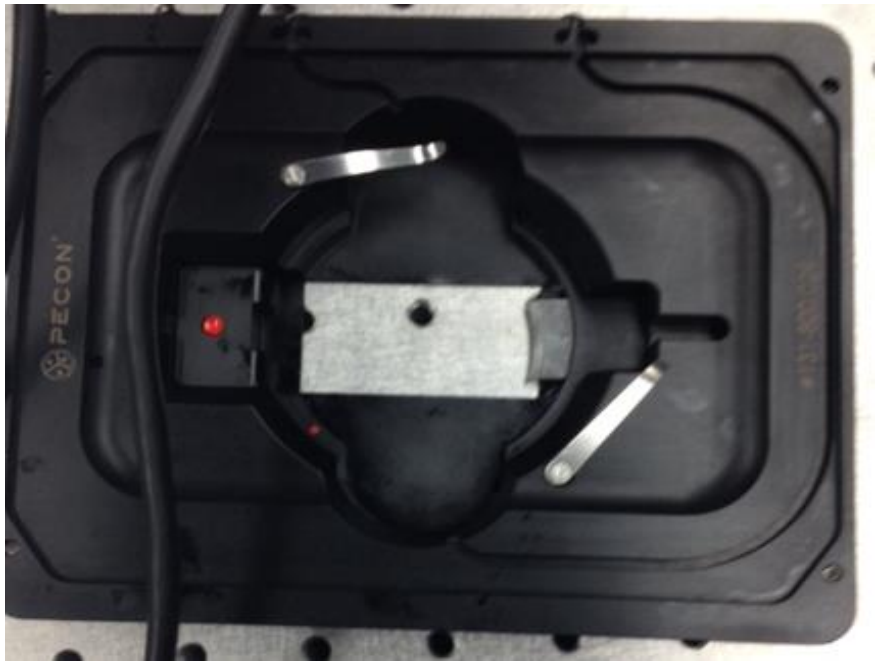
When signing up for microscope time please indicate you will be doing a live cell experiment. If the person before you is doing live cell then they know to keep everything turned on for you. Same goes for when you are finished – check if there is anyone signed up after you and if they are doing live cell you do not have to turn it off.

Before turning on the microscope:

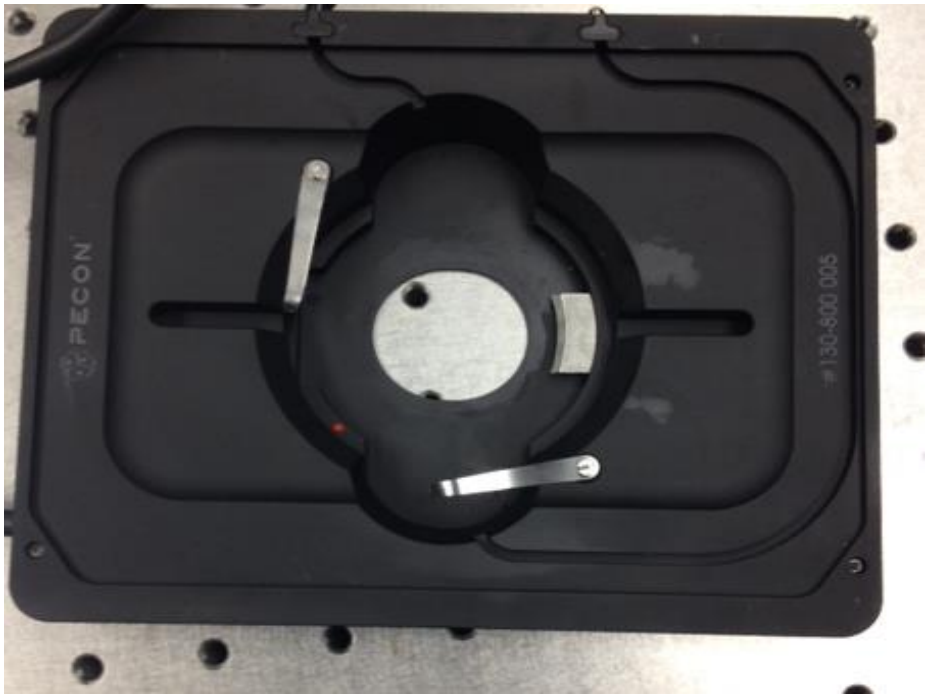
1. **Check that the CO2 is turned on.**

2. **Determine which heated stage insert you will need.**

Chamber Slides

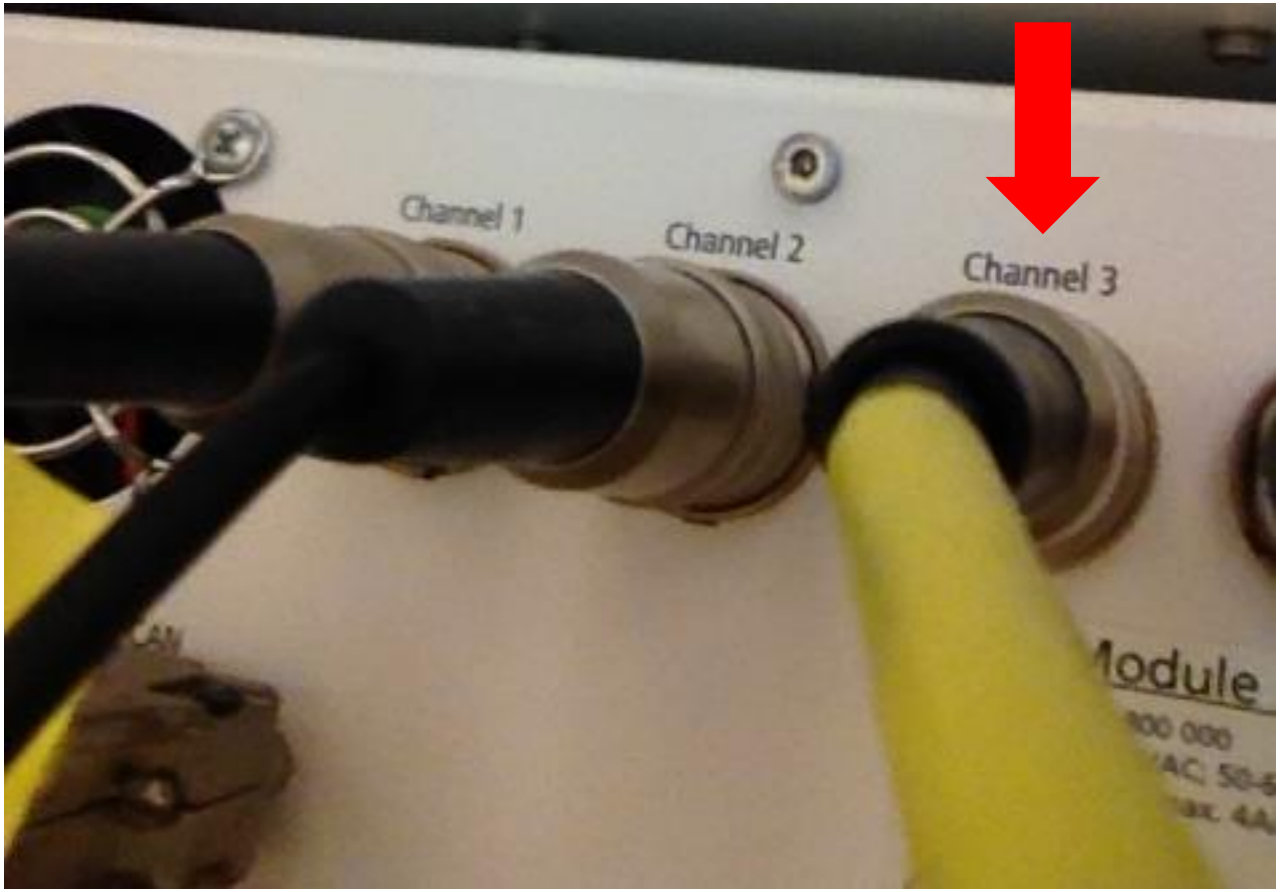


Dishes



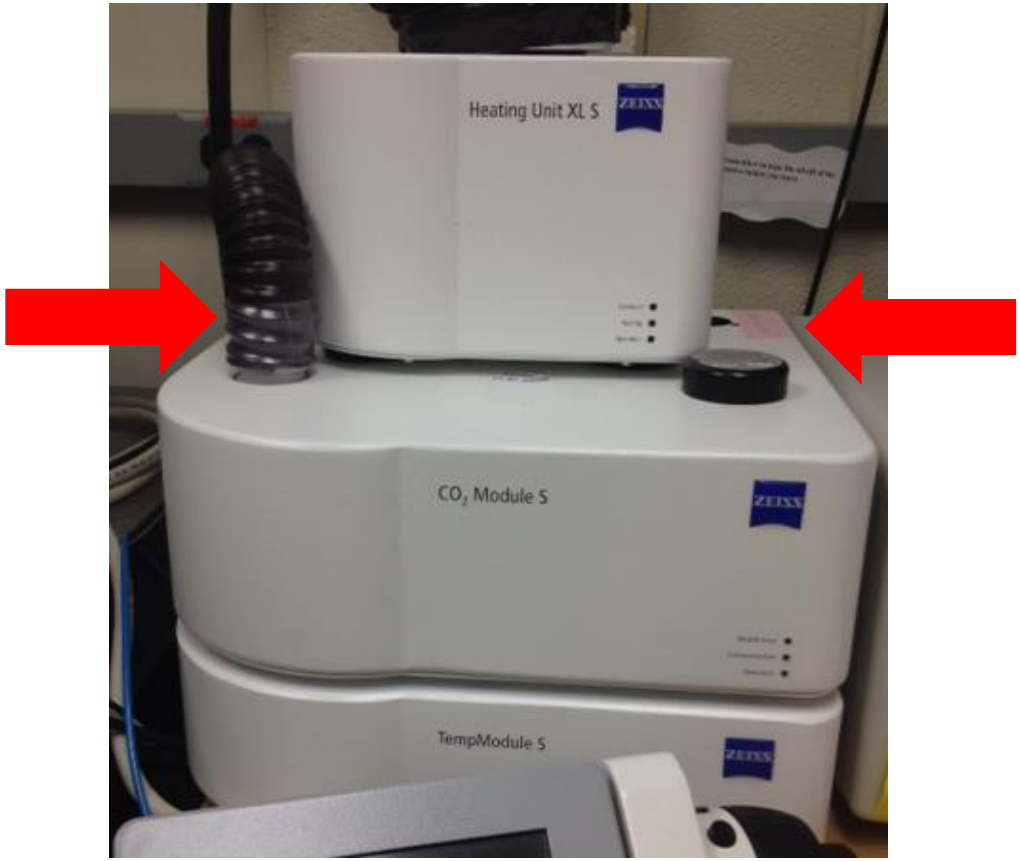
Note: The heated stage insert for chamber slides is located at the LSM780. If you should need it for the LSM710, contact a member of the OMAL staff in advance to make arrangements for it to be moved.

3. **Plug the heated stage insert into Channel 3.**

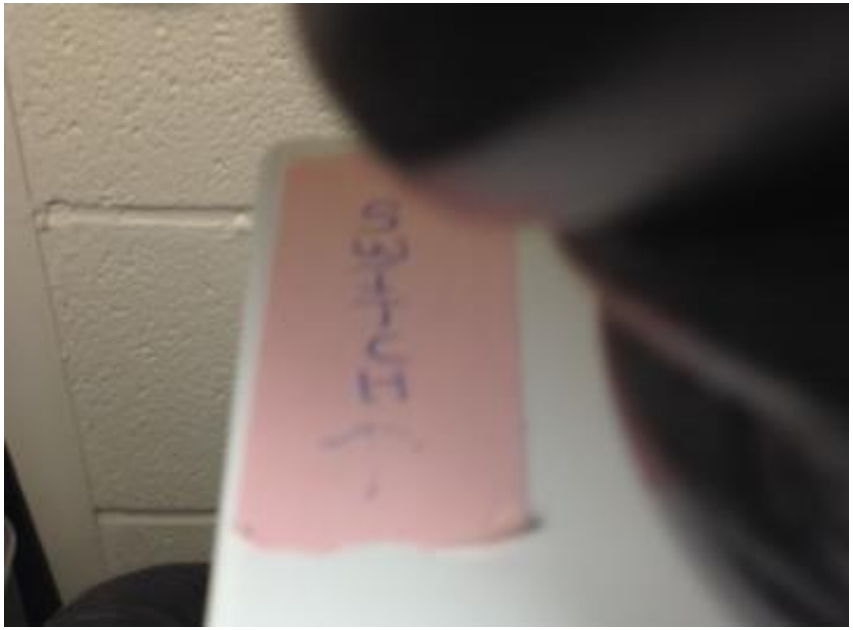


For reference:
Channel 1: Heating Environmental Chamber.
Channel 2: Bottle warmer.
Channel 3: Heated Stage Insert.

4. **Turn on Live Cell Unit. There are two switches that need to be turned on. They are located on the back of the unit and are indicated with pink tape. There is one on the left side [not visible in this photo but located behind the black tubing] and the other on the right side. Detailed photos are on the following slides.**

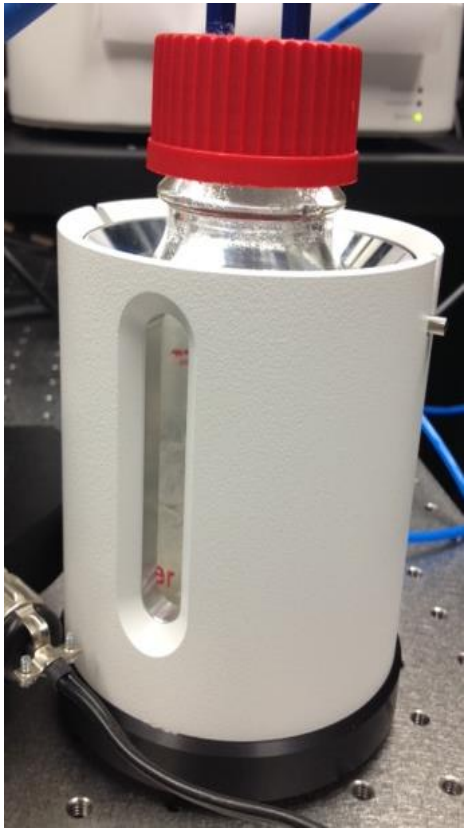


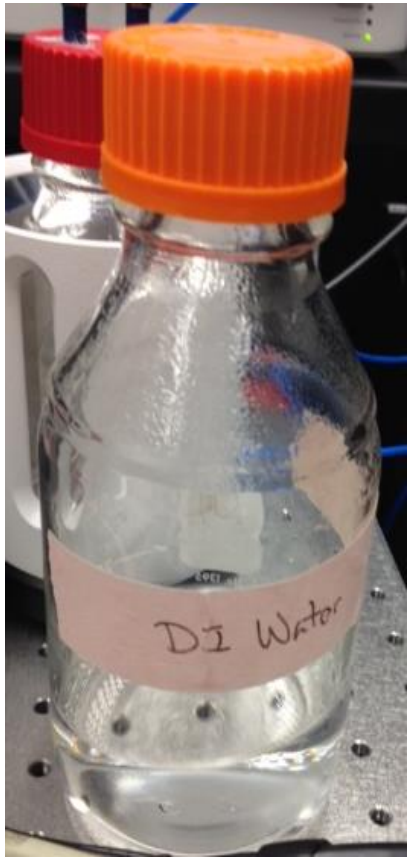
The pink tape that indicates the switch on the left his hidden by the black tubing. You can feel the switch on the back of the unit below the tape.



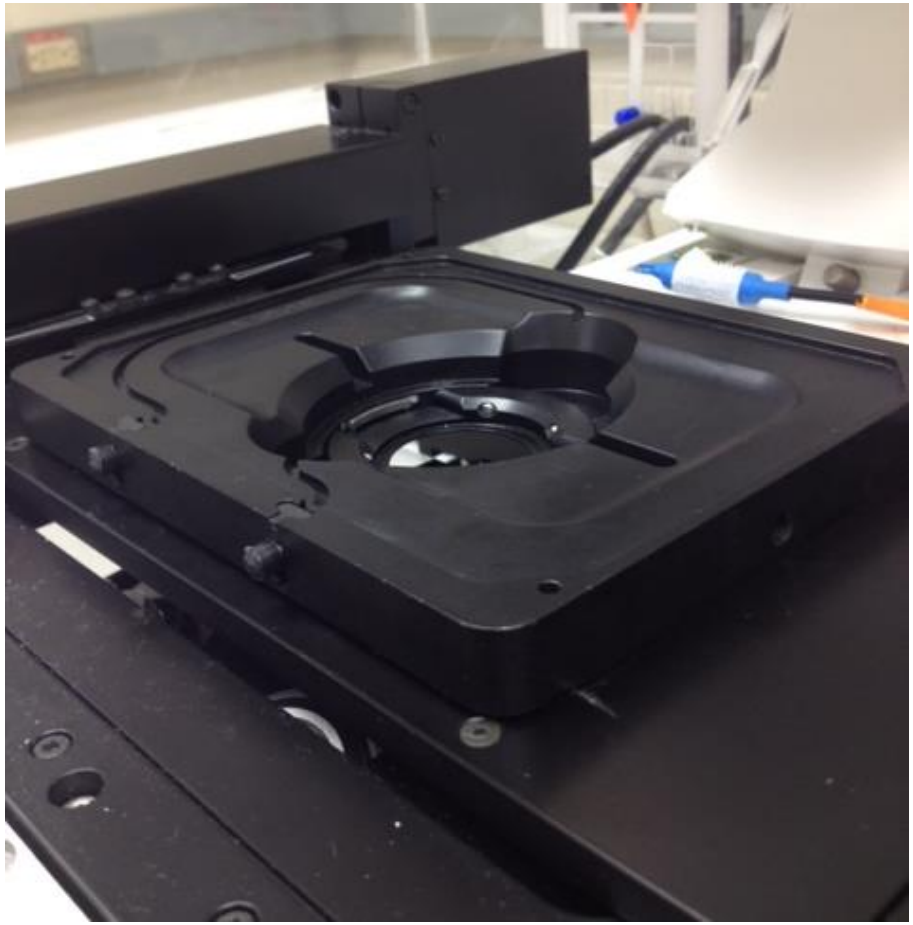
The right hand switch can be found on the back of the unit below the pink tape.

5. **Turn on Microscope using the regular Turn On procedure.**
6. **Check to make sure the water bottle has enough water in it. If not refill.**



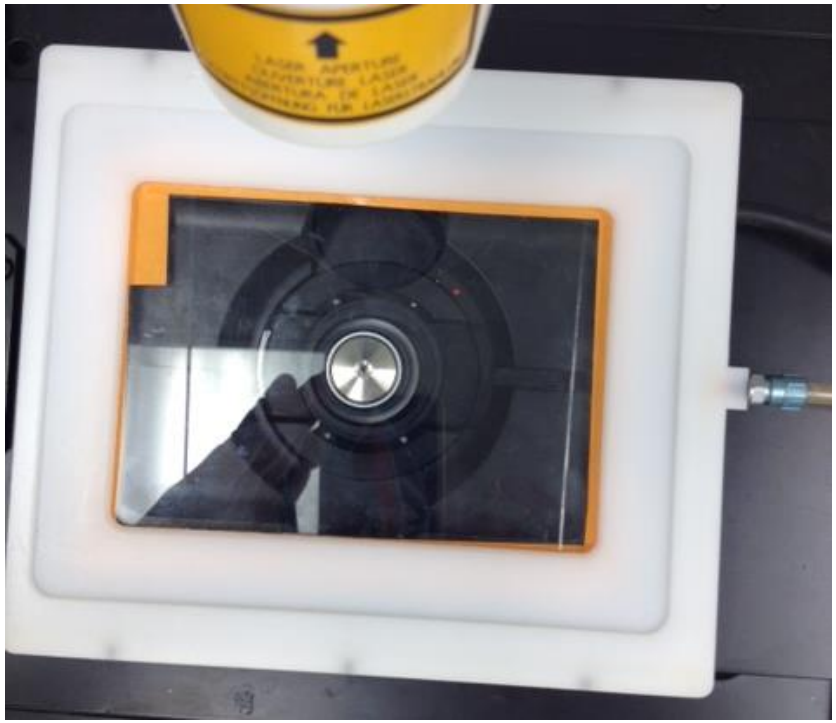


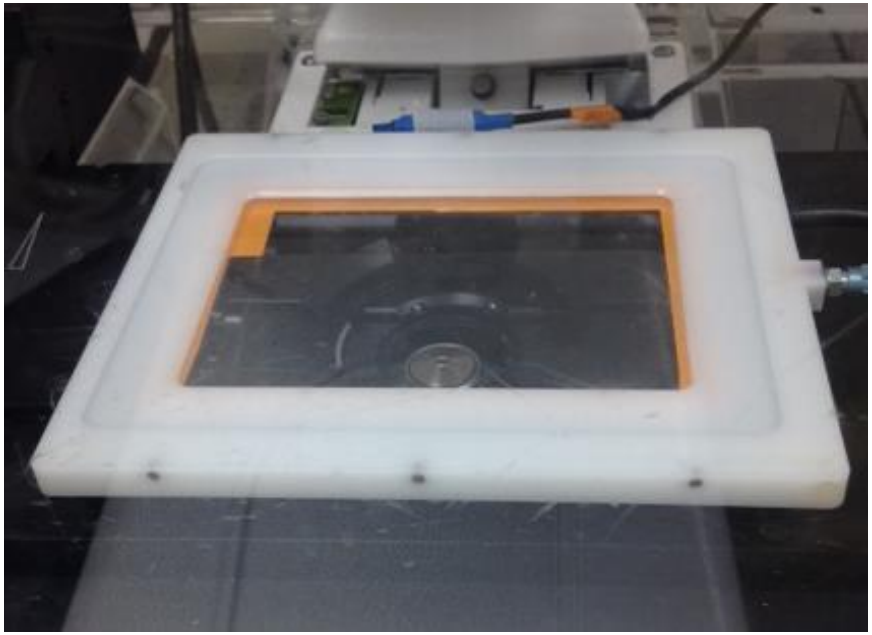
7. **Place heated insert on stage. Make sure it is in securely. The heated insert for slides is placed the same way.**



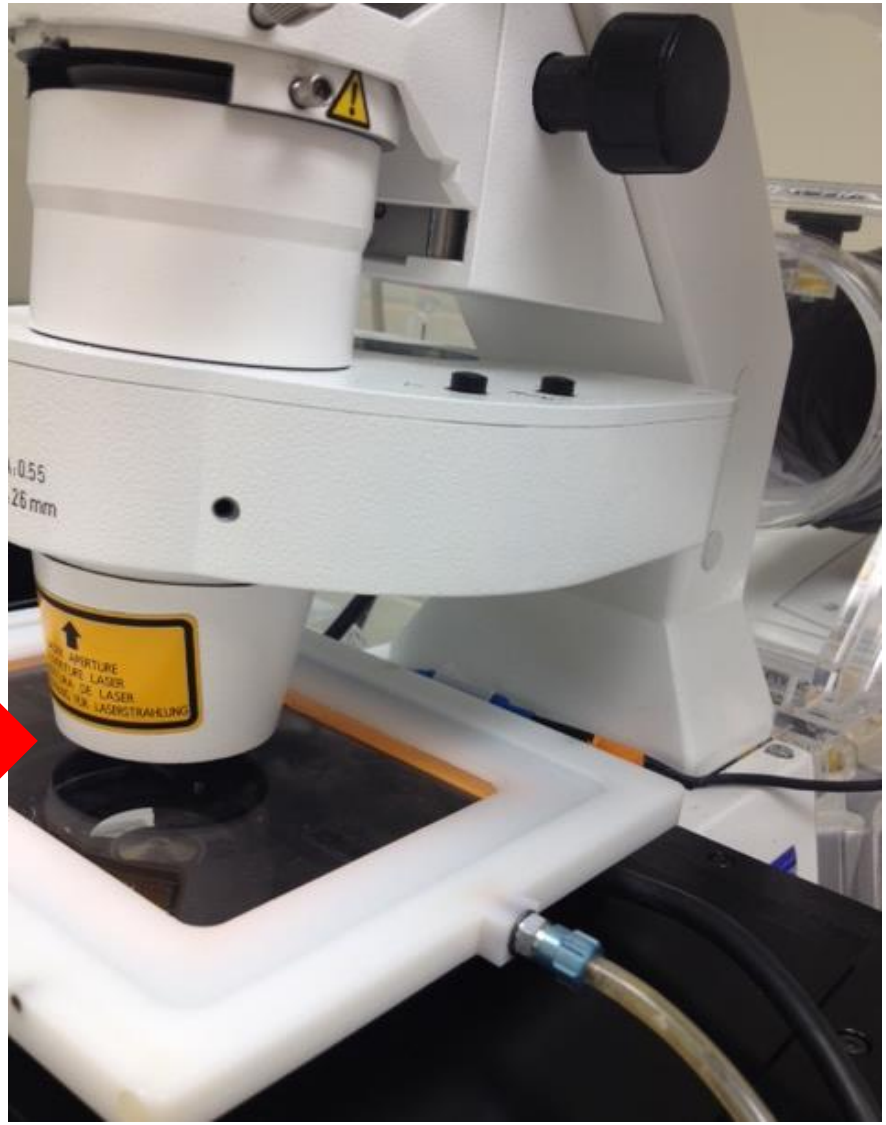
8. **Place the lid on the insert.**

The lid provides CO2 and humidity.

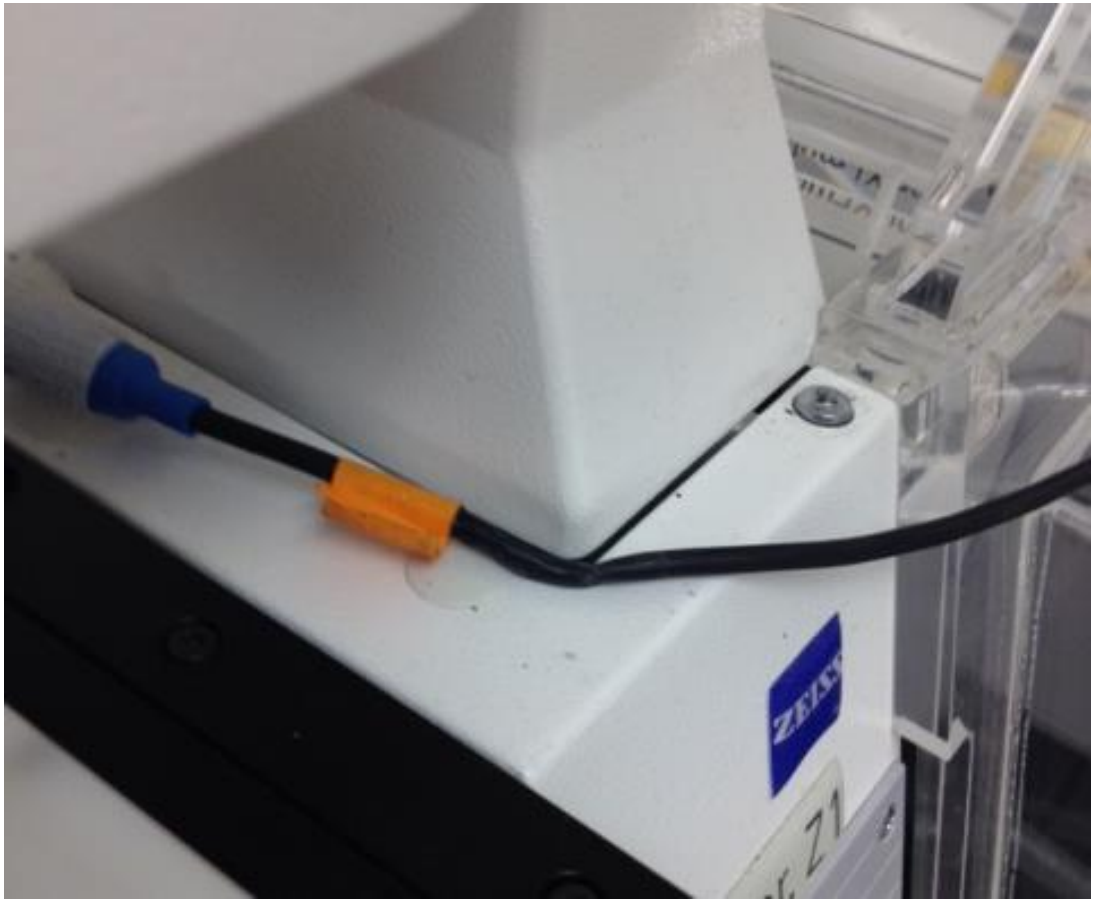




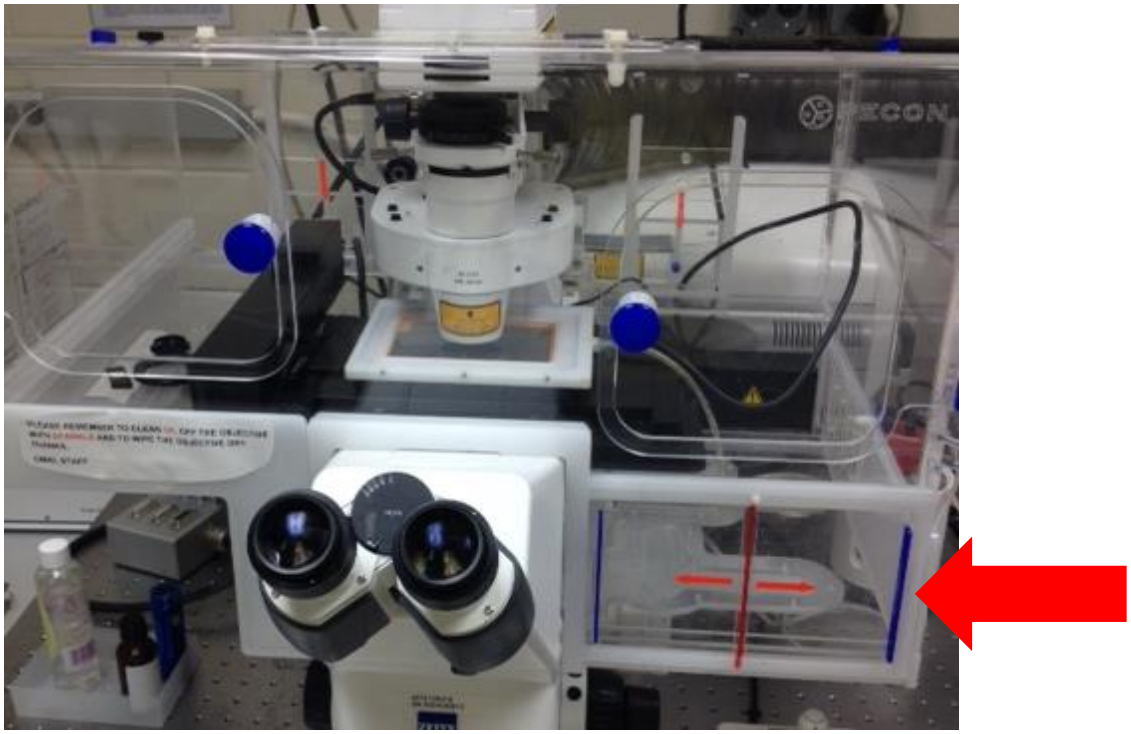
9. **Carefully bring the microscope turret back in place so the condenser does not crack the glass. You may need to raise the condenser so it clears the glass.**

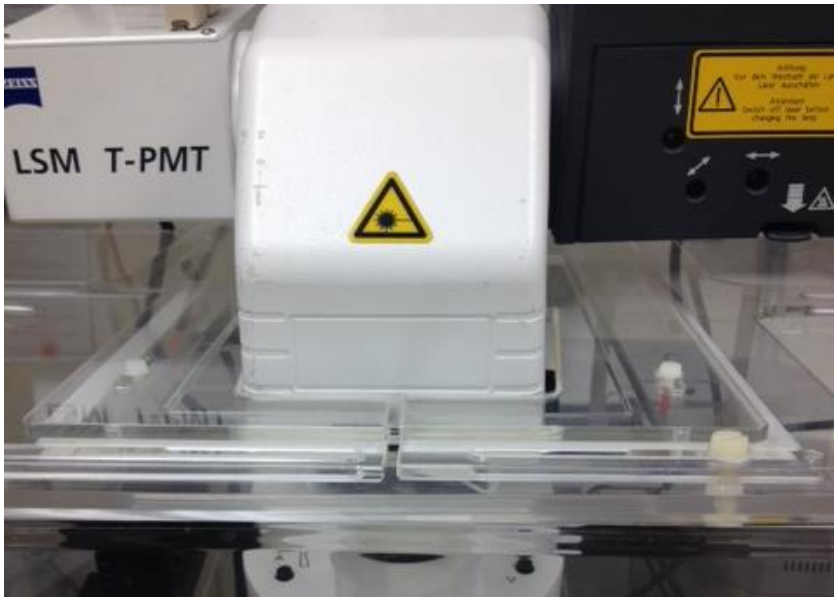


10. **Be careful that the tubing does not get pinched by the microscope arm. If it does it will result in the laser safety lock being activated and the lasers will not fire.**



11. **Make sure the live cell chamber is completely closed. Pay careful attention to the sliding doors on the lower right [red arrow].**

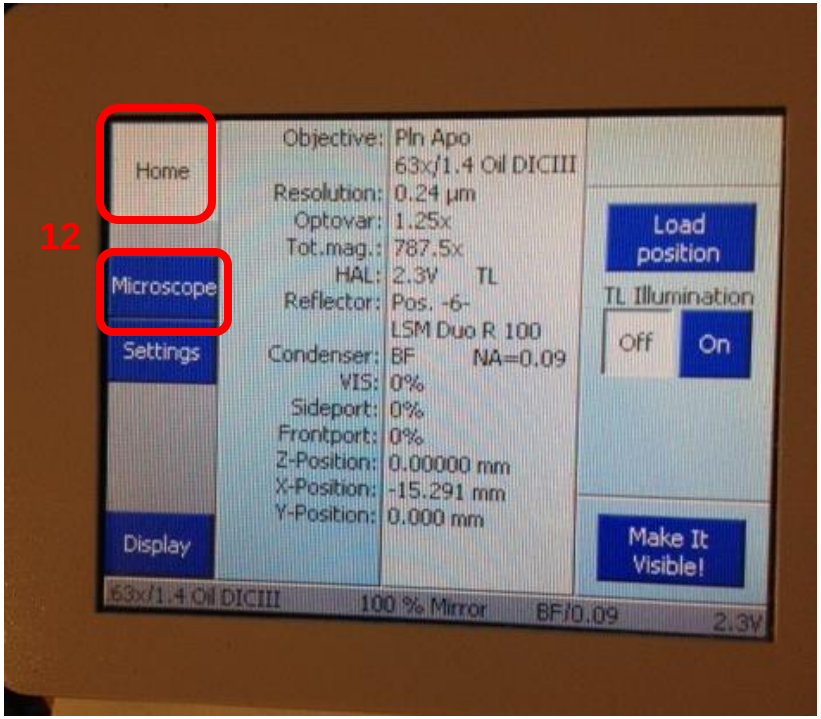




View of top of live cell chamber with doors closed.

On the Touch Pad:

12. **On the Home Screen tap Microscope.**
13. **Tap Incubation. If live cell elements were not turned on before the microscope was turned on this space would be blank.**



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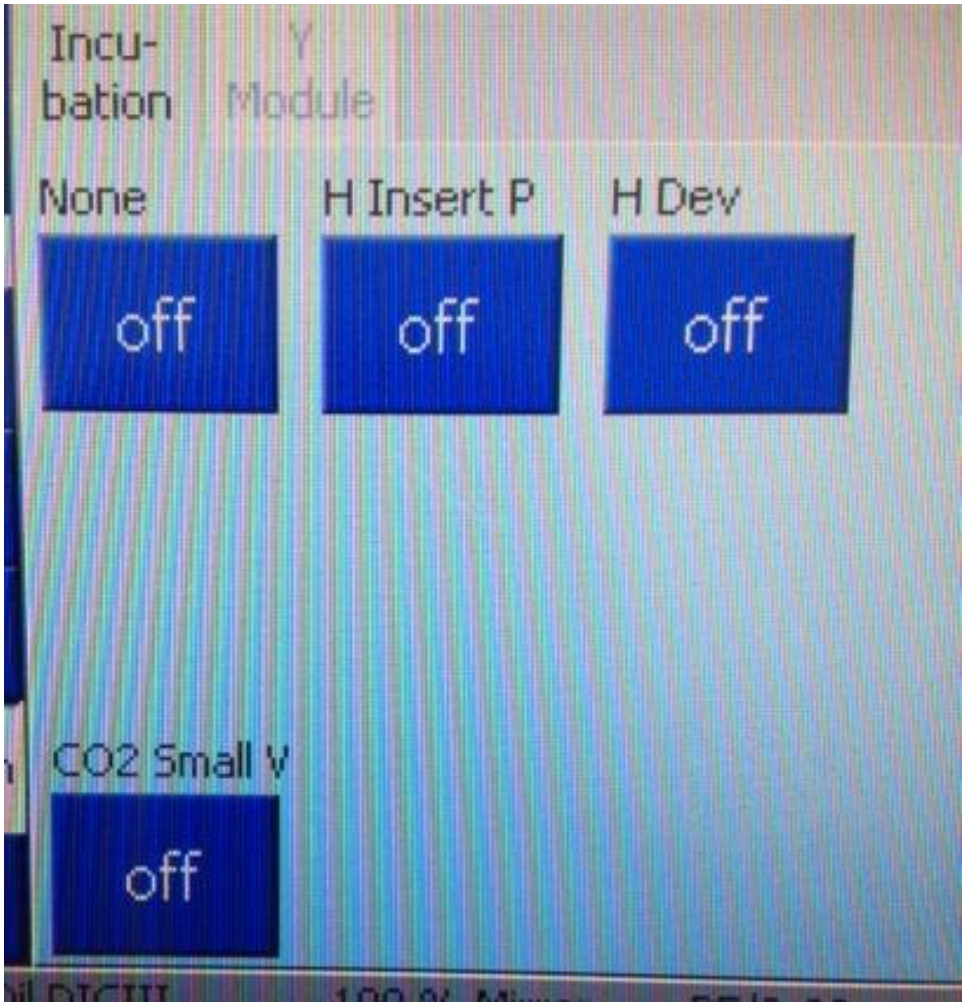
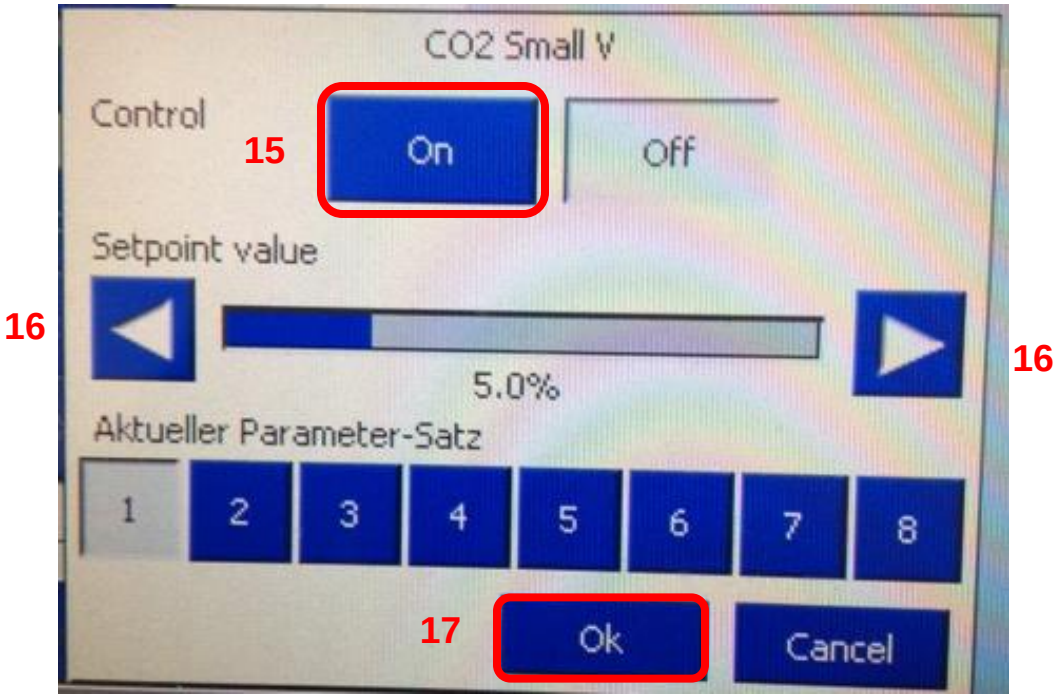
14. Currently all elements are turned off. Tap on each one to turn them on.

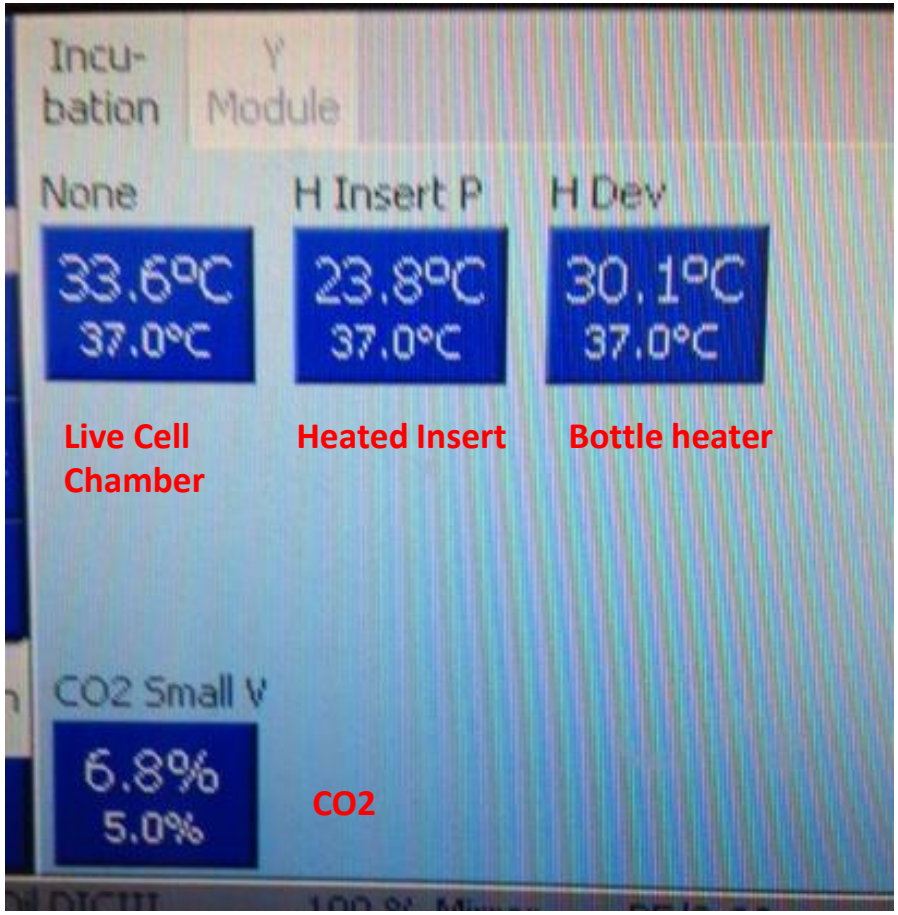


15. Tap On to turn it on.
16. Setpoint value can be adjusted by the arrows.
17. Tap Ok.

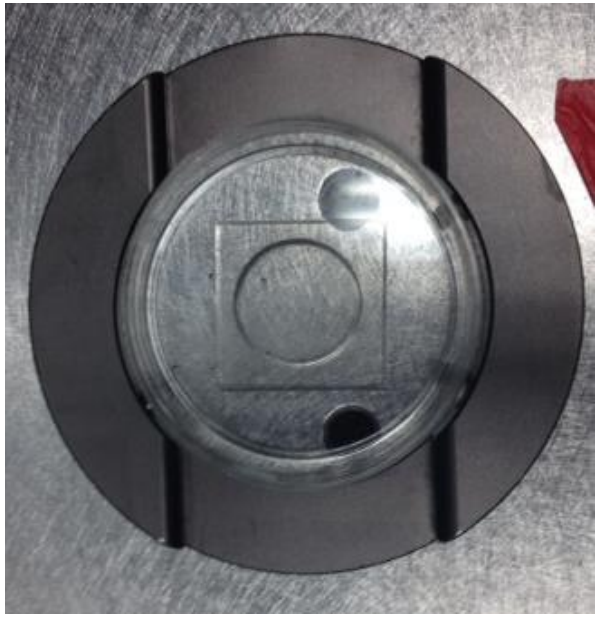


18. **The touch screen now shows the status of each element.**

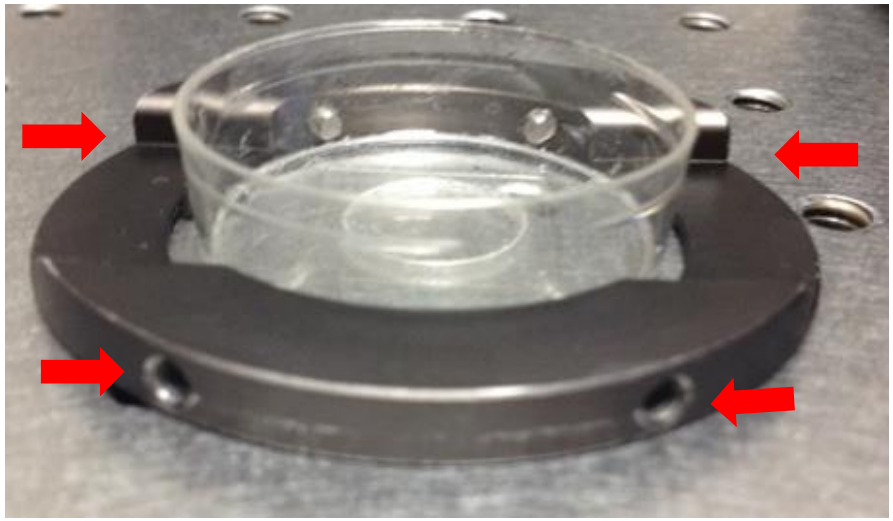
The top number is the current reading.
The bottom number is the set point.



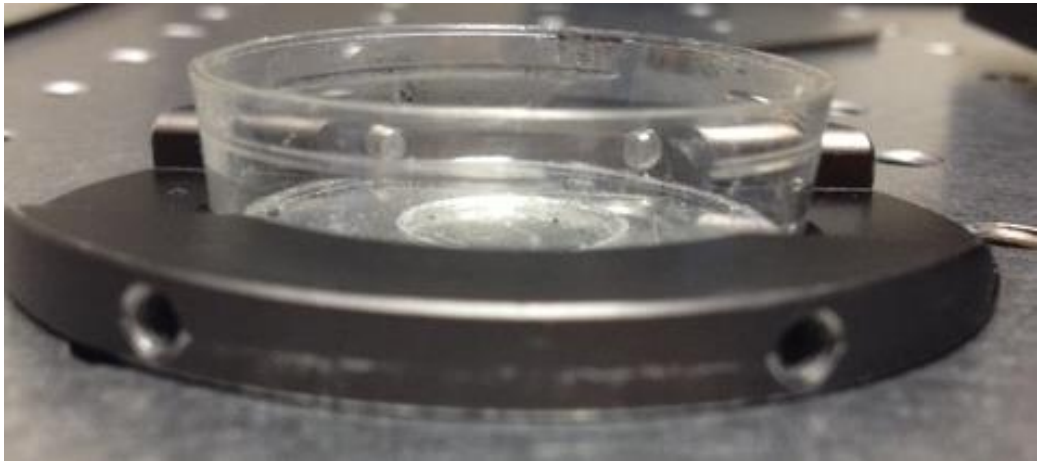
19. Dishes must be placed in an insert and secured before being put into the heated insert.



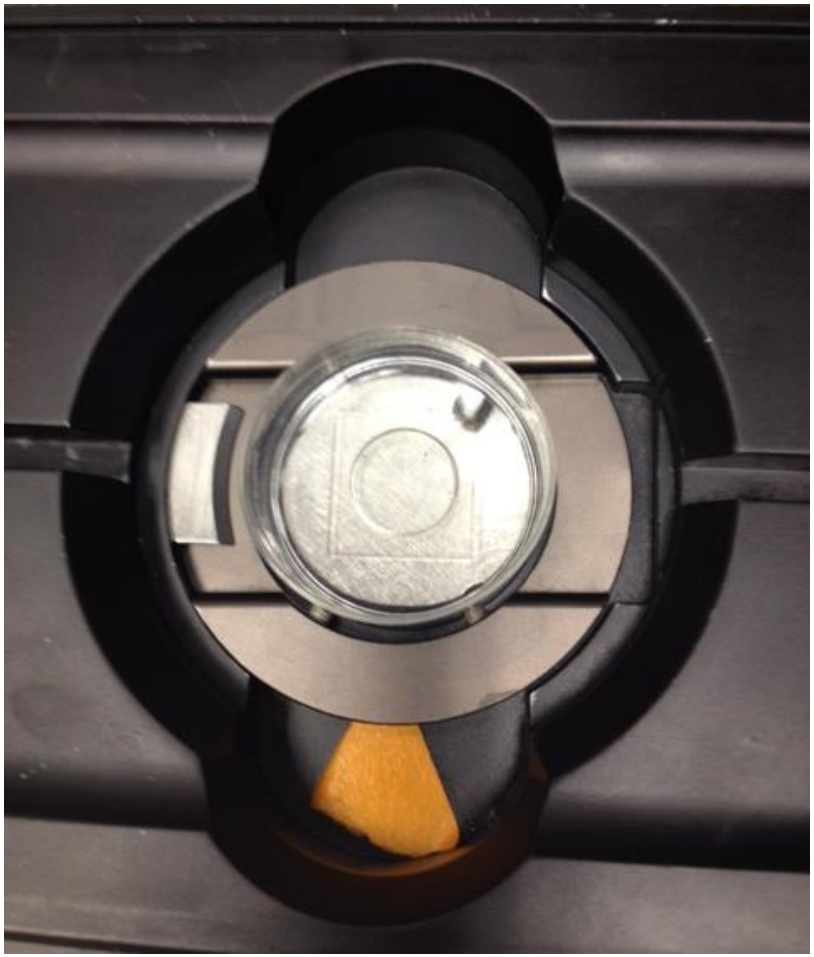
Use screws to tighten dish in to place [see arrows].



Make sure the dish is level before inserting it into the heated insert. If not level you will not see even fluorescence images.



20. This shows how the dish holder fits into the heated insert.



It should take 1-2 hours for conditions to stabilize in the chamber.

When you are finished:

1. **Check Microscope schedule to see if the person behind you is doing live cell.**
2. **Turn off live cell elements.**
3. **Remove live cell elements from microscope.**
4. **Turn off CO2 at wall.**