

Luminex Training Manual

Start Up

1. Turn on the machine-- 3 switches
 - a. Back of the machine
 - b. Back of the XY Platform
 - c. Back of the Sheath fluid pump
2. Turn on the computer and log in
3. Open the software-Luminex 100IS
4. Machine must warm up for 30 minutes prior to calibration or data acquisition.

Daily Start Up

Daily start-up protocol will run prime/alcohol flush/wash

1. Open door (eject button)
2. Remove the reservoir (small box in back right corner)
3. Fill with 70% alcohol (ethanol, isopropanol etc) and replace
4. Add water to next 4 clean wells on wash plate
5. Place the plate on the stage and close the door (eject button)
6. Click daily startup under favorites
7. Choose the wells on the plate map that have the water in them by dragging the colored wells until they are where you want them.
8. Click finish.
9. Click start plate.
10. This will take about 30 minutes.
11. Change the reservoir back to water.

**** IF DD INDICATOR TURNS RED, YOU MUST RUN CALIBRATION. OTHERWISE PROCEED TO RUN PLATE. ****

Calibration

**** MACHINE MUST BE WARMED UP FOR 30 MINUTES PRIOR TO CALIBRATION. ****

1. Remove calibration bead box from the refrigerator.
2. There are 2 bottles CAL1, CAL2.
3. For each bottle, sonicate 15 seconds, then vortex 15 seconds.
4. Place the 96 well calibration plate on the bench.
5. Place 4 drops of each in successive wells (in groups of 2) Begin with:

Bottle	Well
CAL1	C1

6. Fill the next 4 wells with water.
7. Place plate on the stage and close the door.
8. **If new bottle of Calibration beads only
9. Under the instrument calibration section
 - a. Click CAL1 icon
 - b. Select NEW CAL TARGET
 - c. Verify the lot number on the screen is the same as the bottle.
 - d. Click OK
10. Repeat for CAL2.
11. Click calibration only tab under favorites.
12. Drag the wells to where your cal and con are on the plate.
13. Click Finish
14. Click Start Plate

Create a Template for the Run

1. Click the Acq detail tab
2. Click Create Template Icon-ball with a wizard hat
3. Select Data collection only from the template type menu
4. Enter:
5. Template name-whatever you wish to call it
6. Description- something that will later tell you what it is for
7. Version number
8. Check to see that values on the bottom match:

Field	Value
Sample Volume	75ul (May Vary Based on assay-refer to your manual)
Sample Timeout	100
XY Heater Lamp	35
Low Limit	8000 (May Vary Based on assay-refer to your manual)
High Limit	13500 (May Vary Based on assay-refer to your manual)

9. Click next
 - a. Enter the number of tests: This is the number of targets/analytes-not number of samples
10. Press Enter
 - a. Fill in table

- i. Name: cytokine/target name
 - ii. Units: MFI
 - iii. Bead ID: look on insert sheet
 - iv. Minimum Beads:50
11. Click on next
12. Select options
 - a. Highlight "Wash from reservoir"
 - b. Click arrow next to repeat
13. Click Save
14. Click Close
15. Click HOME tab
 - a. Click "add template" in the favorites box
 - b. Select the template you just created.
 - c. Click Select

Running a Plate

1. From the home screen:
2. Double click on your template from the favorites box.
3. Enter the following information

Field	Value	Location
Batch Info	Username_requisition number	Side of screen
Acquire Patient x (Number)	Number of wells to analyze	Top of screen

4. Click Apply
5. Select the wells which are to be read-on the plate map
6. Select Save and Load
7. Click finish
8. This will open the Run Batch Tab
9. Open the door -eject button
10. Place the plate on the stage
11. Press Start Plate
12. Once plate is done running, Click Export Data

Shut Down

1. Daily Shut Down
 - a. From the Home Tab
 - b. Open the door
 - c. Remove reservoir from the stage
 - d. Fill it with 70% alcohol

- e. Fill next 4 wells of wash plate with water
 - f. Load the plate and reservoir to the stage
 - g. Click Daily Shut Down
 - h. Select the wells the wash are in
 - i. Click Finish
 - j. Click Start Plate
2. When the washes are finished-
- a. Shut down the IS Software
 - b. Turn off the computer
 - c. Turn off all three switches to the machine.