

FACSCalibur Startup Procedures

Always turn on the FACSCalibur before turning on the computer when acquiring data. This enables the computer to recognize that the cytometer is connected. When analyzing data, it is not necessary to turn on the cytometer.

1. Turn on the FACSCalibur.

The power switch is located in the lower right corner of the instrument. The LO fluid control button lights green and the STANDBY button lights orange.

2. Turn on the FACStation.

3. Slide the fluidics drawer out. Flip the vent valve toggle switch in the direction of the arrow.

The switch, located between the sheath and waste reservoirs, relieves the sheath reservoir of air pressure.

4. Slide the metal sheath bracket away from you, and lift up to remove it.

5. Remove the sheath reservoir, remove the fluid detection probe, and fill the reservoir to 3/4 its capacity with the recommended sheath fluid.

CAUTION: Avoid filling the sheath reservoir to its maximum capacity. When a full reservoir is pressurized, fluid may be forced into the air supply tubing, preventing proper pressurization.

6. Replace the sheath reservoir.

7. Replace the sheath bracket by sliding the metal bracket toward you. Make sure that the square lip on the tight side of the bracket is covering the ball plunger.

8. Connect the sheath fluid detection probe connector and snap the fluid and air supply tubing into place by pushing firmly until you hear a click (make sure to position the tubing so there are no kinks).

9. Flip the vent valve toggle switch to pressurize the reservoir.

Check the sheath reservoir to make sure it is properly pressurized. A properly pressurized sheath reservoir will not be able to move around under the bracket.

10. Disconnect the waste tubing (orange) and the air tubing (white) from the FACSCalibur instrument squeezing the metal clip on the quick disconnect and pulling.

CAUTION: It is good practice to empty the waste reservoir when you fill the sheath reservoir. This prevents the waste reservoir from overflowing. Follow good laboratory practice: wear appropriate safety attire and gloves when handling waste materials.

11. Disconnect the fluid detection probe connector by squeezing the sides and pulling.

12. Remove the waste reservoir, remove the fluid detection probe, and empty the reservoir according to local, state and federal hazardous waste handling regulations.

13. Fill the waste container with 400 mL of undiluted household bleach.

This will make a 10% solution of bleach in the waste container once it is full.

14. Replace the waste reservoir.

15. Connect the fluid detection probe connector and snap the waste and air vent tubing into place by pushing firmly until you hear a click (make sure to position the tubing so there are no kinks).

16. Check the sheath filter to be sure that no air bubbles are

trapped inside.

If bubbles are visible, gently tap the filter body to dislodge them and force them to the top. Push the roller in the pinchcock forward to allow the pressurized sheath fluid to force the air bubbles into the waste reservoir. Return the pinchcock to dosed position. Repeat steps if necessary.

NOTE: To remove stubborn bubbles, squeeze the metal dip and pull the sheath filter from the lower quick-disconnect port. Lift the filter up and firmly tap the filter body to dislodge the bubbles. Reconnect the filter to its lower quick-disconnect port. Push the roller in the pinchcock forward to allow the pressurized sheath filter to force air bubbles into the waste reservoir. Return the pinchcock the dosed position.

NOTE: Allow the laser to warm up for 5 minutes after turning on the instrument, before running samples.

