Job Aid

BD FACSCelesta™ Flow Cytometer: Performing system start up and shutdown with BD FACSFlow™ Supply System

This job aid provides instructions to help you get started with using your cytometer. It contains instructions for performing system startup and shutdown with the BD FACSFlow™ Supply System (FFSS). For additional information, see the appropriate cytometer user's guide.

Materials needed

The following materials are needed to complete the system startup and shutdown.

- BD FACSFlow™ Sheath Fluid Cat. No. 342003 (20L)
- BD FACSClean™ Solution Cat. No. 340345 (5L)
- BD® Detergent Solution Concentrate Cat. No. 660585
- Bleach
- DI water
- 12x75 mm round-bottom tubes

System startup

Turning on the system

1. Turn on the computer and log in to the operating system.

2. Verify the BD FACSFlow™ Supply System is on.

   NOTE If the cytometer is run with a BD FACSFlow™ Supply System that is powered off or improperly connected:

   - The sheath plenum can run dry, compromising data collection.
   - The waste container can overflow.

   To avoid these hazards, check the sheath supply and turn on the BD FACSFlow™ Supply System before turning on the cytometer.

3. Press the power button on the right side of the instrument to turn on the cytometer main power.

4. Open BD® Coherent Connection Software to start the lasers.

   Most lasers will start automatically when the control software starts. For the UV laser, ensure the correct power is set and then start it manually.

Turning on the system, continued

5. Open BD FACSDiva™ Software.

6. Enter your log in information and then click **OK.**

7. Ensure that the software is connected (Cytometer Connected) to the cytometer by checking the bottom of the Cytometer window.

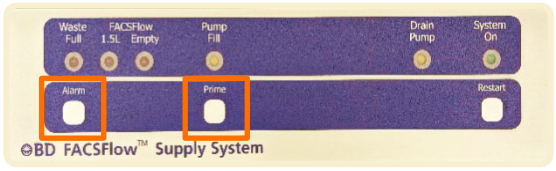
   If necessary, select **Cytometer > Connect.**

Checking the sheath fluid levels

1. Verify that the system status on the control panel is set to HTS MODE.

   - If needed, press and hold the Mode button for at least 3 seconds to change the mode.
   - If needed, silence the alarm by pressing Alarm on the BD FACSFlow™ Supply System panel.

   NOTE When the system is in HTS mode, both visual and audible alarms on the cytometer are deactivated. The fluid level alarms on the BD FACSFlow™ Supply System will be used instead.



2. Check for fluid in the sheath plenum. If the plenum is dry, fill it with approximately 1.5 L of sheath fluid by pressing and holding Prime button on the BD FACSFlow™ Supply System until enough sheath is added to the plenum.

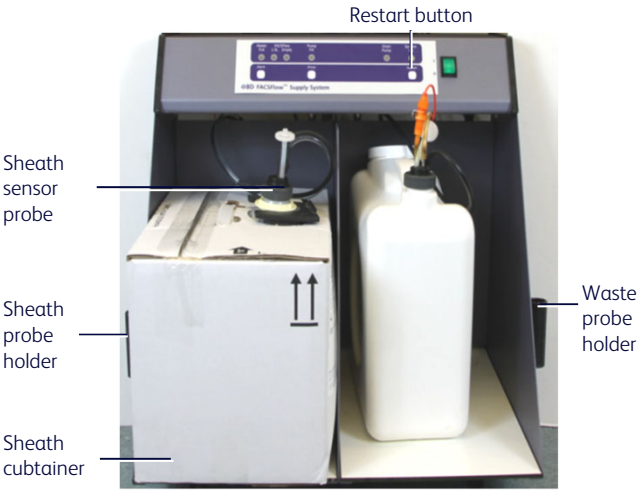
3. If the sheath cubitainer needs replacement, loosen the sheath sensor probe cap assembly and carefully remove the sensor probe from the sheath cubitainer, keeping it at a 45-degree angle.

4. Place the sensor probe into the sheath probe holder on the side of the BD FACSFlow™ Supply System unit.

5. Remove the cap and load the new sheath cubitainer into the left side of the unit.

6. Insert the sensor probe at a 45-degree angle into the sheath cubitainer and tighten the cap assembly.

7. Press Restart on the BD FACSFlow™ Supply System panel to reset the alarm.



Emptying the waste

1. Remove the cap assembly and level probe. Place the probe into the waste probe holder.

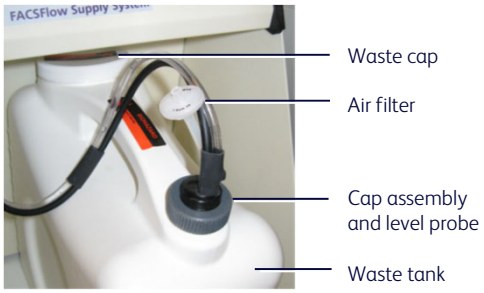
2. Remove the waste cap and place it on the bench label-side up.

   NOTE Do not get the waste cap wet.

3. Empty the waste tank according to your standard laboratory procedures for biohazardous waste.

4. Add 1 L of bleach to the waste tank (a sufficient quantity of bleach to maintain at least 10% concentration of bleach when full). Reinstall the waste cap.

5. Retighten the cap assembly on the waste tank.



Checking for air bubbles

1. Check the sheath filter for trapped air bubbles.

2. If bubbles are visible, gently tap the filter body to dislodge the bubbles and force them to the top.

3. Direct the vent line into a beaker and press the small button at the end of the vent fitting against the side of the beaker until a steady stream of fluid empties from the filter.

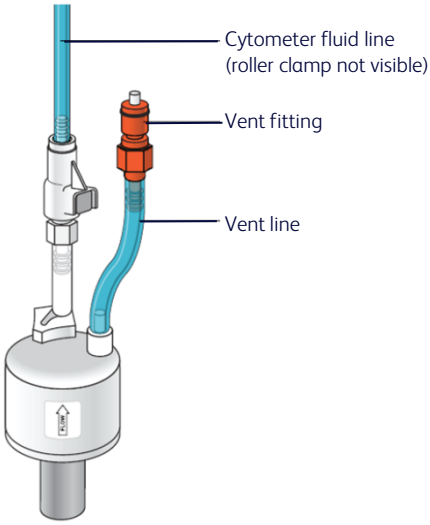
4. Tilt the filter and verify that no trapped air remains in the filter.

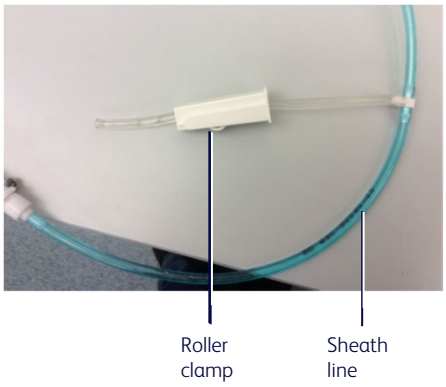
5. Repeat steps 3 and 4 until no air is observed in the filter.

6. Check the sheath line for air bubbles.

7. Open the roller clamp at the sheath filter to bleed off any air in the line. Use a beaker to collect the sheath fluid that is expelled.

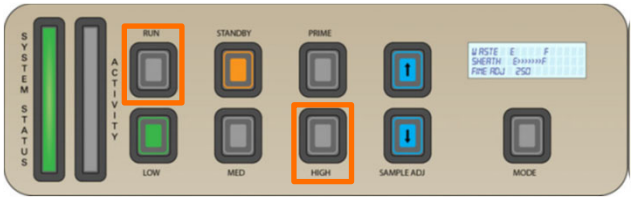
8. Close the roller clamp.





Rinsing the system

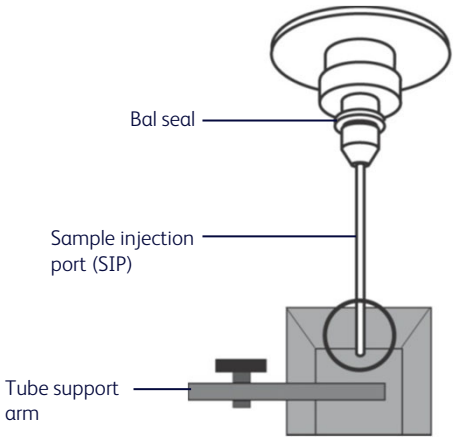
1. Set the sample fine adjust to 250, if needed.



2. Press RUN and HIGH on the cytometer fluidics control panel.

3. Install a tube containing 3 mL of 1.5% BD® Detergent Solution on the SIP and center the tube support arm under the tube.

   NOTE The RUN button turns green when the tube has pressurized. If the button remains amber, check the seal on the sheath tank or plenum, and check for a cracked tube or a worn Bal seal.



4. Allow the solution to run on high for 10 minutes.

5. Install a tube containing 3 mL of DI water on the SIP. Allow the solution to run on high for 10 minutes.

6. Press the STANDBY button on the fluidics control panel and place a tube containing no more than 1 mL of DI water on the SIP.

System shutdown

Cleaning the system

1. Press RUN and HIGH on the cytometer fluidics control panel.

2. Install a tube containing 3 mL of a cleaning solution onto the cytometer with the support arm to the side (vacuum on) and run for 1 minute.

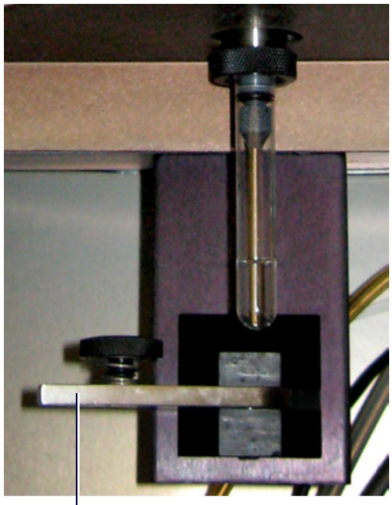
   Use BD FACSClean™ Solution or a 1:10 dilution of bleach in DI water.

3. Move the support arm under the tube (vacuum off) and continue to run for 5 minutes.

4. Repeat steps 2 and 3 with 1.5% BD® Detergent Solution.

5. Repeat steps 2 and 3 with DI water.

6. Install a tube with 1 mL of DI water onto the cytometer and press STANDBY on the cytometer fluidics control panel.



Support arm to the side

Turning off the system

1. Exit BD FACSDiva™ Software and shut down the computer.

2. Leave the BD FACSFlow™ Supply System on.

3. Turn off the cytometer.

BD Life Sciences, San Jose, California, 95131, USA

bdbiosciences.com