Job Aid

BD FACSDiscover™ A8 Cell Analyzer: Performing a system startup

This job aid contains instructions for how to perform a system startup. Selecting the appropriate fluidics startup depends on which shutdown procedure was previously completed. For additional information, see the *BD FACSDiscover™ A8 Cell Analyzer with BD CellView™ Image Technology and BD SpectralFX™ Technology User's Guide*.

- If a Daily Shutdown was performed, you can perform either a Daily or an Extended Fluidics Startup.
- If a Daily or an Extended Fluidics Startup was performed for the day, and fluidics is running, click **Skip**.
- If a Daily Shutdown was performed and a Daily Fluidics Startup was not completed within 24 hours, it is recommended that you perform an Extended Fluidics Startup.

Start up system → Set up experiment → Establish settings → Acquire and analyze → Manage data → Shut down system

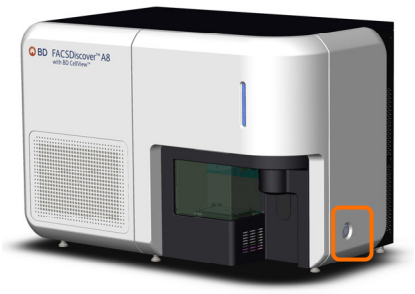
Materials needed

The following items are needed to complete a system startup:

- BD FACSDiscover™ Setup Beads
- Deionized (DI) water
- BD CellView™ Calibration Beads

Starting up the system

Turning on the cytometer and workstation



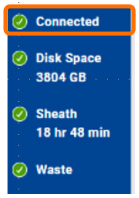
1. Press the power button on the PC workstation, and log into Microsoft Windows® OS.

2. Press the power button on the right side of the upper unit.

   NOTE Ensure the instrument is switched on for at least 30 minutes before use.

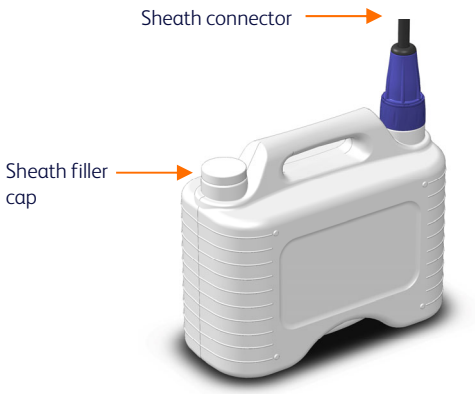
3. Open BD FACSChorus™ Software by double-clicking the shortcut on the desktop and then log in using your user information.

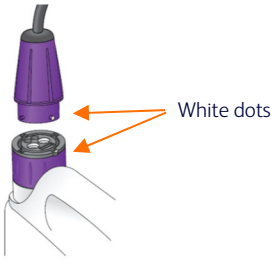
   The software connects with the analyzer within 5 minutes. When the software connects with the instrument, the Connected status in the Status Indicator panel initially turns yellow. After the connection is established successfully, the Connected status turns green.



Filling the sheath tank

1. Disconnect the top blue connector from the sheath tank by twisting it to the left and set aside.
2. Unscrew the sheath filler cap.
3. Fill the sheath tank with at least 1 L of DI (deionized water).
   NOTE The sheath tank should not be filled with any fluid except deionized (DI) water.
4. Re-install the sheath filler cap.
5. Re-install the connector by matching the white dots, pushing it down, and twisting it to the right to tighten.





Emptying the waste tank

Caution! All biological specimens and materials can transmit potentially fatal infections. To prevent exposure to biohazardous agents, expose waste container contents to bleach (10% of total volume) before disposal. Dispose of waste in accordance with local regulations. Use proper precautions and wear suitable protective clothing, eyewear, and gloves.

1. Disconnect the top orange connector from the waste tank by twisting it to the left and set aside.
2. Unscrew the waste trap assembly and place it on the bench with the label side up.
3. Dispose of the waste at a waste dumping station.
4. Add approximately 1 L of undiluted bleach to the waste tank for a final volume of 10% bleach.
5. Re-install the waste trap assembly.
6. Reconnect the connector by matching the white dots, pushing it down, and twisting it to the right to tighten.

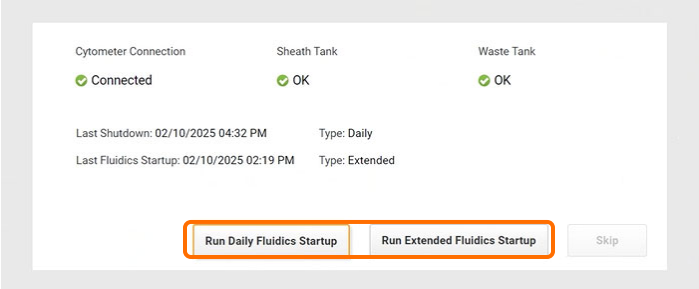
Running a Fluidics Startup

Initiating a fluidics startup

Selecting the appropriate Fluidics Startup depends on which shutdown was previously completed.

1. Click **Run Daily Fluidics Startup** or **Run Extended Fluidics Startup.**

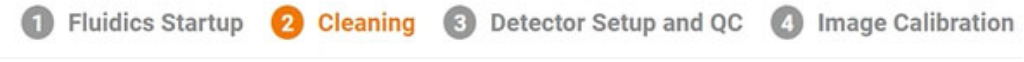
   NOTE If a Daily Shutdown was performed and a Daily Fluidics Startup was not completed within 24 hours, it is recommended that you perform an Extended Fluidics Startup.



2. Follow the prompts on the screen through each numbered step.
   a. At prompt 2, load a clean tube containing 3 mL of DI water on the manual tube port. An extended fluidics startup will prime the entire fluidics system with DI water.
   b. Click **Continue.**

3. Click **Close** and then **Continue** to proceed to the next step in the Startup workflow: Cleaning.

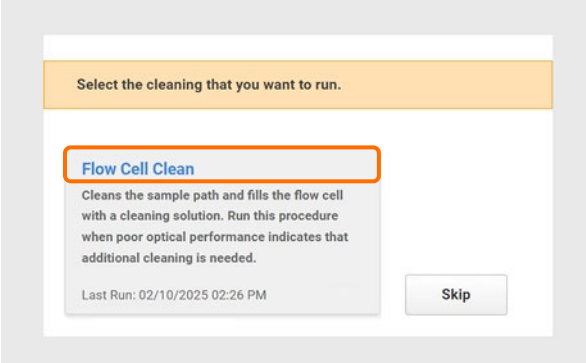
Cleaning the flow cell



This step cleans the sample path and fills the flow cell with your cleaning solution of choice (DI water or 10% CONTRAD® 70, or 1.5% BD® Detergent Solution Concentrate). However, for a daily startup, we recommend performing the cleaning with DI water.

1. Click **Flow Cell Clean** and follow each numbered prompt in the guided workflow.

   NOTE For additional cleaning, use 1.5% BD® Detergent Solution or 10% CONTRAD 70® instead of DI water.



2. At prompt 3, load a clean tube with 3 mL of your solution of choice on the manual tube port.

3. After cleaning is complete, click **Close,** then **Continue** to proceed to the next step in the System Startup workflow: Setup and QC.

Running a Detector Setup and QC

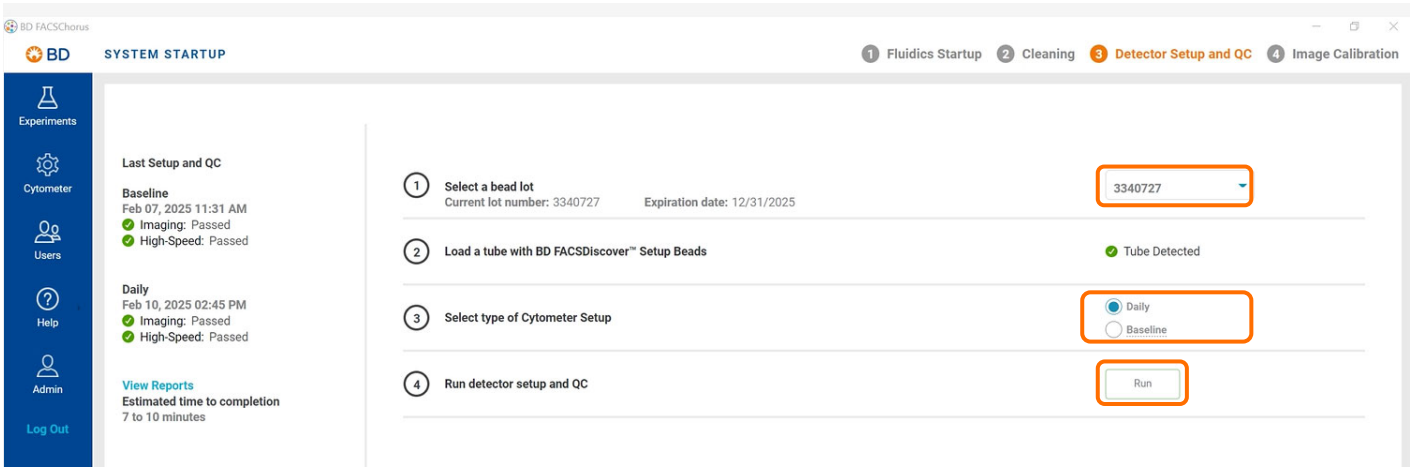
Baseline: A baseline setup must be run when you select a new bead lot to set the basic performance criteria for the cell analyzer. A baseline run takes more than 10 minutes to complete.
NOTE An established baseline expires after 6 months. It is recommended that you re-run the baseline every 6 months to re-establish basic performance criteria. Also, BD service personnel might create a new baseline as part of preventative maintenance or major service procedures.

Daily Performance: A daily performance run should be performed each day you run the system to ensure the cell analyzer performs consistently over time. A daily performance run takes about 7–10 minutes to complete.

1. Prepare a tube of BD FACSDiscover™ Setup Beads according to the package insert.

2. Verify the bead lot file by expanding the drop-down on the right and selecting a bead lot (indicated by the bead lot number).
   NOTE: To add a new bead lot file, see Downloading and importing BD FACSDiscover™ Setup Beads bead lot files in the user's guide.

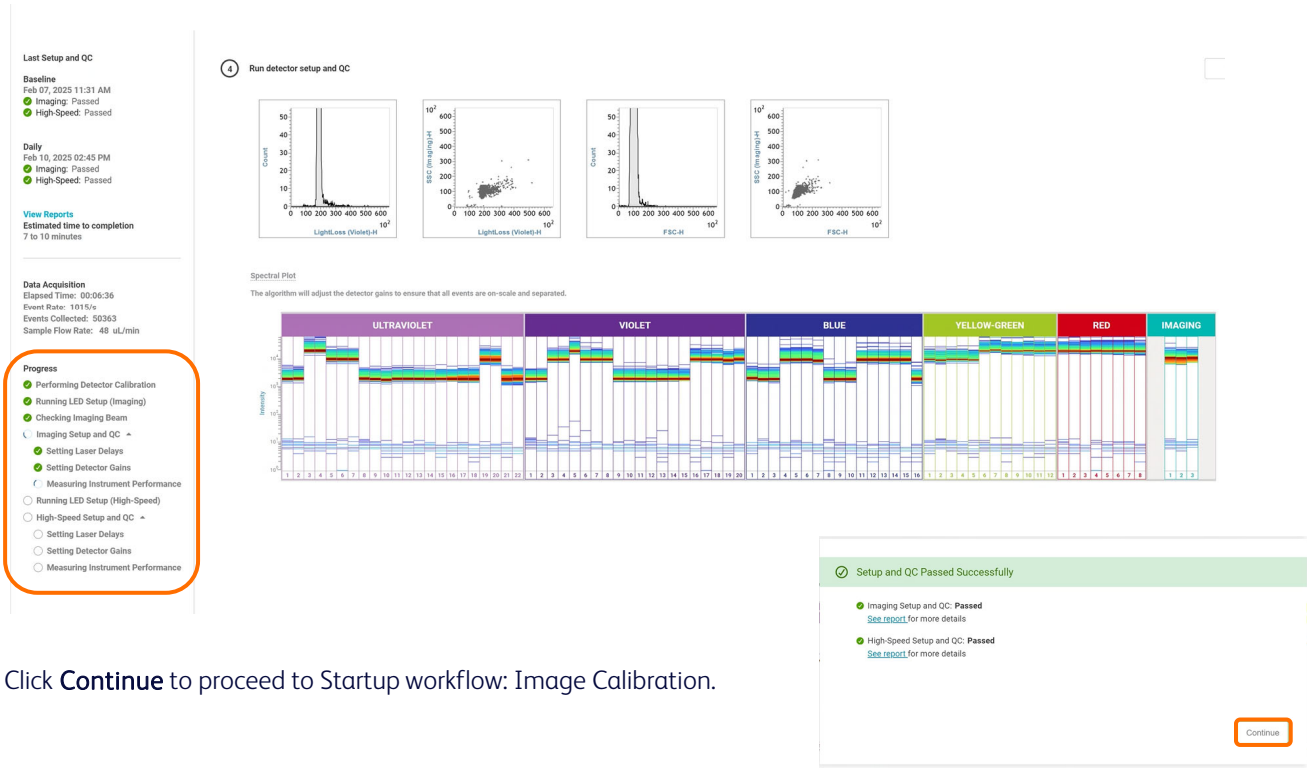
3. Load a tube of BD FACSDiscover™ Setup Beads.



4. Select the type of Cytometer Setup, and click **Run**.

Running a Setup and QC, continued

The steps progress sequentially, and a spinning circle indicates the current step. When Setting Laser Delays begins, events start appearing on the plots. Both the imaging and high-speed setup and QC will be completed during this step.



5. Click **Continue** to proceed to Startup workflow: Image Calibration.

Running the Image Calibration

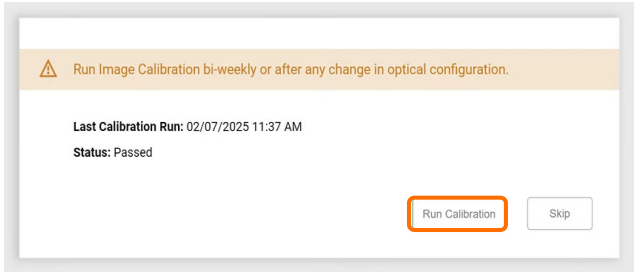
BD CellView™ Calibration Beads are used to optimize the imaging capability of the BD FACSDiscover™ A8 Cell Analyzer. Run the Image Calibration every two weeks, after any change in optical configuration, or for certain imaging troubleshooting steps.

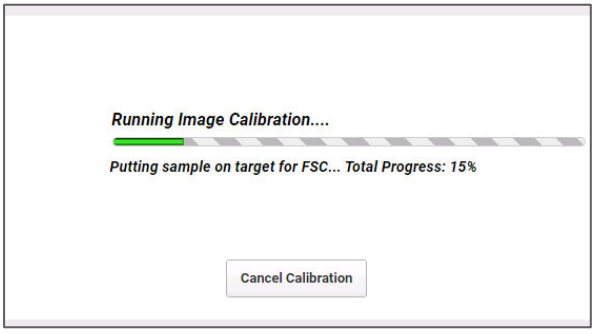
1. Prepare the BD CellView™ Calibration Beads according to the package insert.

2. Click **Run Calibration**.

3. Load a tube of BD CellView™ Calibration Beads and click **Continue**.
   The system displays a progress bar and identifies the various stages of the process.

4. When the image calibration is completed successfully, a dialog is displayed and the Experiment page opens automatically.
   NOTE It is recommended to rerun Daily Setup and QC after Image Calibration has been completed.

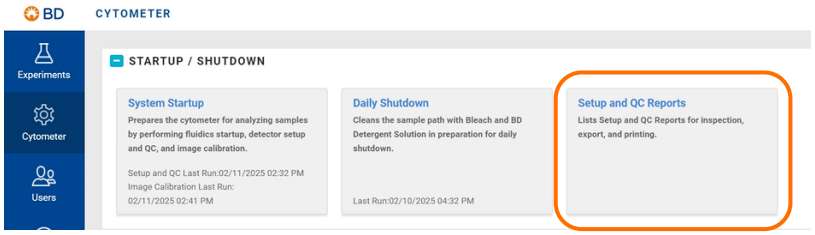




Viewing the Reports

1. On the Cytometer page, click **Setup & QC Reports**.

   NOTE A report is not generated if the Setup and QC failed to complete.

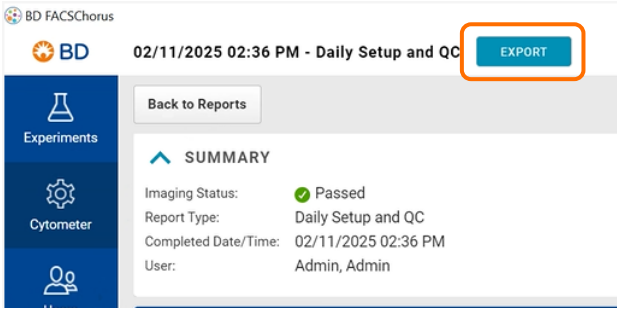


2. From the list of reports, click a report to open it.

Completed Date/Time	Type	Bead Lot ID	Imaging Status	High-Speed Status
02/11/2025 02:32 PM	Daily Setup and QC	3340727	Passed	Passed
02/10/2025 02:45 PM	Daily Setup and QC	3340727	Passed	Passed
02/07/2025 11:31 AM	Baseline Setup and QC	3340727	Passed	Passed
02/06/2025 03:35 PM	Daily Setup and QC	4057288E	Completed with Warnings	Completed with Warnings
02/05/2025 03:25 PM	Daily Setup and QC	4057288E	Completed with Warnings	Completed with Warnings

3. Click **Export** to export the report as a PDF.

4. Select a folder to save the report and click **Save**.



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