BD FACSVia™ System Quick Reference Guide

This guide contains instructions for using the BD FACSVia™ system with BD FACSVia™ clinical software.

Workflow Overview

The following figure shows the daily flow cytometry workflow when using the BD FACSVia system.

Start Up System	▶	Quality Control	▶	Collect Data	▶	Perform a SIP clean	▶	Review Reports	▶	Shut Down System

Starting Up the System

Routine startup takes approximately 13 minutes once initiated.

Check Fluids

❶ Check the in-line sheath filter to verify that it has not dried out.

❷ Fill each bottle with the appropriate fluid. Add:
- 2 liters of 0.2-µm filtered deionized (DI) water with Sheath Additive to the sheath bottle.
- 250 mL of BD™ FACSClean solution to the BD FACSClean bottle.
- 250 mL of appropriately diluted BD™ Detergent Solution Concentrate to the detergent bottle.

❸ Empty the waste bottle and add 200 mL of undiluted bleach.

For manual startup:

❶ Place a tube containing at least 2 mL of DI water on the SIP.

❷ Press the power button on the computer system and on the front of the cytometer.
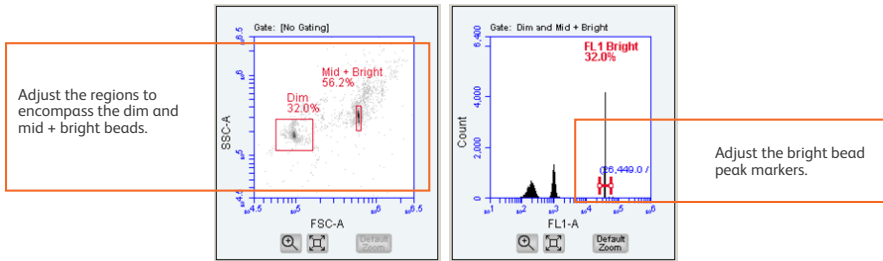
When using the BD FACSVia™ Loader:

❶ Press the power button on the computer system and on the front of the cytometer.

❷ Click **Eject Rack** and load fresh cleaning tubes in the designated spaces. Click **Load Rack**.

- 2 mL of BD FACSClean in the triangle position.
- 2 mL of DI water in the circle position.
- 2 mL of DI water in the square position.

Cytometer is ready for QC.	🚦	Cytometer is connected and ready.
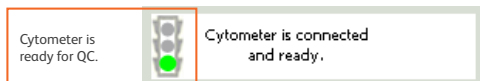
Performing Quality Control

Running QC

1 Prepare CS&T beads (500 µL of DI water to 2 drops of beads).

2 Click the [Instrument QC] button.

3 Select the bead lot file from the **BD CS&T Bead Lot** menu or install a new bead lot file.

4 Load CS&T beads with the correct lot number.

5 Click [RUN ▶].

Adjust the regions to encompass the dim and mid + bright beads.

Adjust the bright bead peak markers.

6 Analyze results.

Results

QC Report

Parameter	Bright Bead Median	MFI Range		% Bright Bead rCV	Instrument Sensitivity	Sensitivity Spec.	Parameter Pass/Fail
FSC	588246	412275	765654	1.7%	198	30	Pass
SSC	312137	215590	400381	11.2%	73	50	Pass
FL1	36529	24614	45711	2.2%	272	80	Pass
FL2	34382	23474	43594	2.3%	585	200	Pass
FL3	71922	48908	90829	3.5%	72	40	Pass
FL4	56124	42080	78149	4.9%	143	70	Pass

Check whether the parameters have passed, then select Print.

[Print]

Collecting Data

Setting up the worklist

1 Click the **Acquire** tab, then the **Worklist View** tab.

2 Select the test from the **Test** menu.

3 Scan or type the sample ID, patient name, and case number.

4 Scan or type the BD Trucount™ tube information.

5 Enter this information for all samples.

6 Enter IDs for the operator, person preparing the samples, tube rack, and lab director.

7 Save the worklist file (select **File > Save**).

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Acquiring Samples Manually

Recording specimen data manually

1 Load a sample tube, and click [RUN 1 ▶], then click [Run Sample 1].

2 Mix and load the next sample and click [Run Sample 2].

**3** After the last sample, click [Done].

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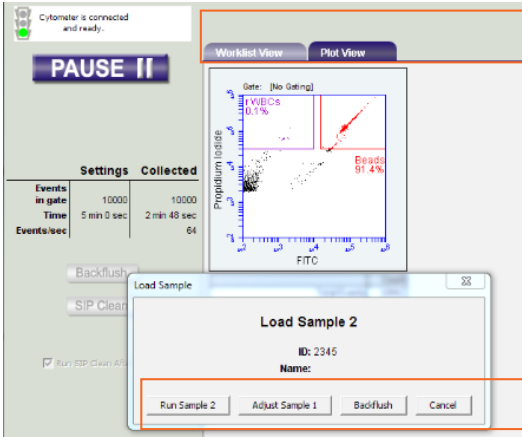
When running samples, the Worklist View changes to the Plot View.

You have the option to adjust the samples here, or you can wait until all samples are finished.

Acquiring Samples Using the Loader

Recording specimen data using the Loader

1. Click **Eject Rack** and load samples onto the rack, then click **Load Rack** .

2. For minimal carryover, ensure that the **Run Sip Clean** and **Run Sip Between Samples** checkboxes are selected.

3. Click **RUN A1 ▶** and the Loader will run all samples listed on the worklist.
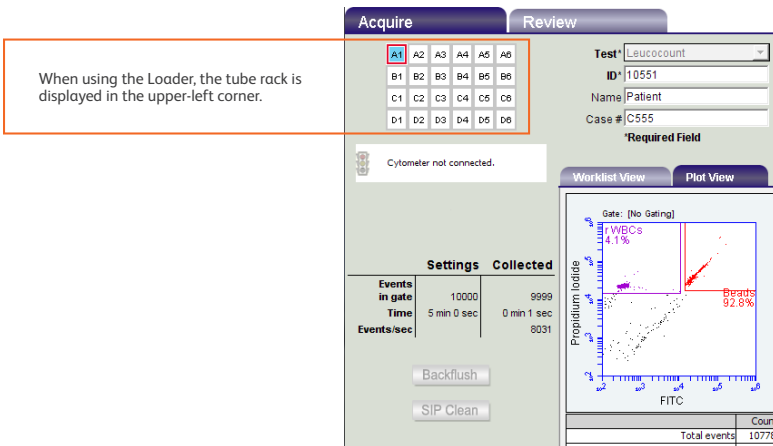
When using the Loader, the tube rack is displayed in the upper-left corner.

3. Click **Eject Rack** and load fresh cleaning tubes in the designated spaces. Click **Load Rack** .

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Performing a SIP Clean Manually

Running a SIP clean manually

**Run after each worklist, and if the instrument is left idle for 15 or more minutes.**

❶ Click **SIP Clean** on the **Acquire** tab.

❷ A dialog will open prompting you to load a tube containing 2 mL of BD FACSClean solution.

❸ Load the tube of BD FACSClean solution and click **SIP Clean**.

❹ When step 1 is complete, a dialog will prompt you to load a tube containing 2 mL of DI water.

❺ Load the tube of water and click **SIP Clean**.

Performing a SIP Clean Using the Loader

Running a SIP clean with the Loader

Run after each worklist, and if the instrument is left idle for 15 or more minutes.

❶ Click **SIP Clean** on the **Acquire** tab.

❷ A dialog will open prompting you to add tubes to the appropriate cleaning cycle positions on the tube rack.
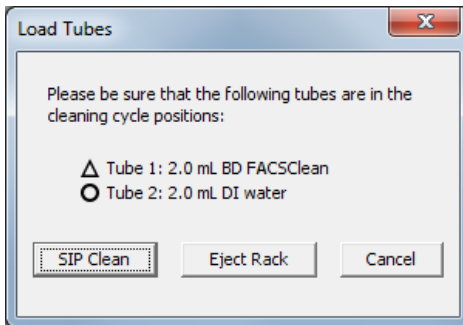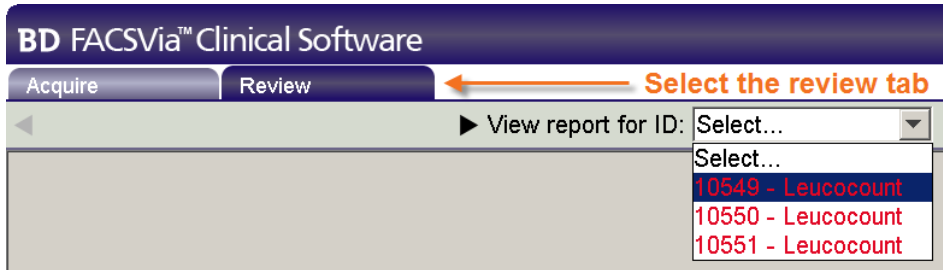

❸ Confirm that there is a tube containing 2 mL of DI water in the square position (☐) of the tube rack.

❹ Click **SIP Clean**.

Reviewing Patient Reports

Analyzing data

❶ Click the **Review** tab and select one of the sample IDs.

❷ Make adjustments to gates as needed.

Shutting Down the System

Shutdown takes approximately 13 minutes once initiated.

Manually

❶ Place a tube with 2 mL of DI water on the SIP.

❷ Press the power button on the cytometer to turn it off (the Clean Fluidics cycle runs for 13 minutes, then the cytometer will turn off).

❸ Shut down the computer.

Using the Loader

❶ Ensure the three cleaning tubes are on the Loader, and press the power button on the cytometer to turn it off (the Clean Fluidics cycle runs for 13 minutes, then the cytometer will turn off).

❷ Shut down the computer.

Caution: If you press the button and hold it down, the instrument bypasses Clean Fluidics and it is forced to shut down. Startup will need additional time the next time the instrument is powered on.