Job Aid

BD FACSDiva™ Software Administrator tasks: BD® CS&T Application

This job aid contains instructions for completing the administrator tasks in BD® Cytometer Setup and Tracking (CS&T) Application. These tasks are available for the Administrator login as well as users with administrator access. See the *BD™ Cytometer Setup and Tracking Application Guide* for additional information.

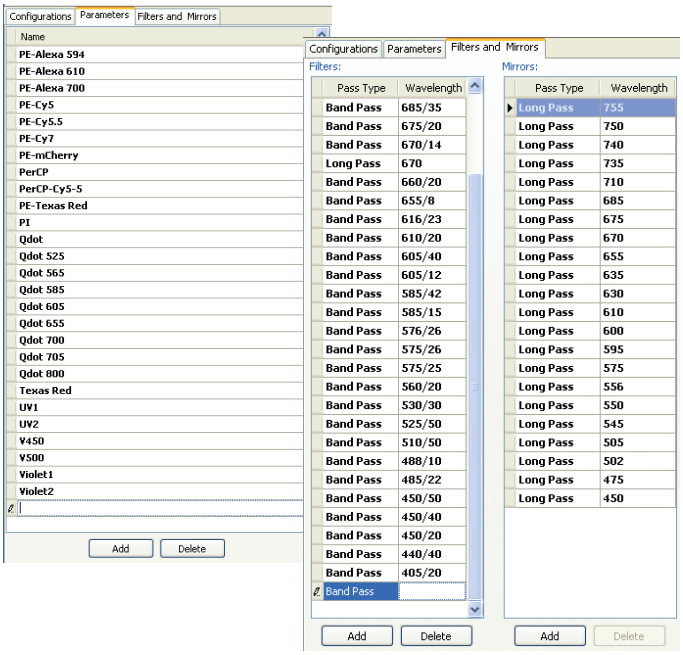
Overview of administrator tasks

Administrators can create new cytometer configurations, manage new bead lots, run baseline definitions, and reset target values in CS&T.

Task	Function	Perform
Create custom cytometer configuration	Defines a software configuration map that matches your physical cytometer setup	• Initially for any fluorochromes, mirrors, filters, sheath pressures, or sort setups not defined in the base configuration • Whenever a new fluorochrome, mirror, filter, sheath pressure, or sort setup not previously defined is needed
Define the cytometer baseline measurements	Defines the baseline performance of your cytometer by measuring key functions of your cytometer	• Initially for each cytometer configuration • When the baseline expires • After major service is performed
Manage bead lot IDs	Provides appropriate bead lot information to the software	When you receive a new bead lot
Reset the target values	Normalizes the performance check by resetting the target values of the new lot to the same target values as the existing lot	When you receive a new bead lot

Creating a custom cytometer configuration

Adding custom parameters, filters, and mirrors



① Select **Cytometer** > **View Configurations**.

② If needed, create custom parameters, filters, and mirrors.

To add custom parameters:

a. Select the **Parameters** tab.

b. Click **Add**.

c. In the Edit field, enter the new parameter name.

To add custom filters and mirrors.

a. Select the **Filters and Mirrors** tab.

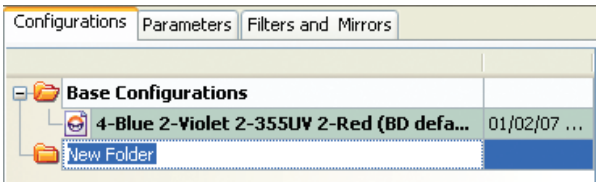
b. Under either the Filters or Mirrors tables, click **Add**.

c. In the Edit field, select the appropriate pass type and enter a wavelength.

Editing an existing configuration

The easiest way to create a new configuration is to edit an existing one. Refer to the *BD™ Cytometer Setup and Tracking Application Guide* for information about creating a new configuration.

① Select the **Configurations** tab.

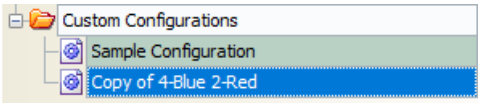


② If needed, create a custom configuration folder.

a. Right-click the **Base Configurations** folder and select **New Folder**.

b. Rename the folder, for example, *Custom Configurations.*

③ Under the **Base Configurations** folder, right-click the base configuration icon and select **Copy**.



④ Right-click the custom configuration folder and select **Paste**.

⑤ Rename the pasted configuration.

⑥ Double-click the configuration to open the edit configuration window.

Editing an existing configuration, continued

⑦ In the configuration window, edit the configuration. Use the tabs below the graphic to display each array individually.

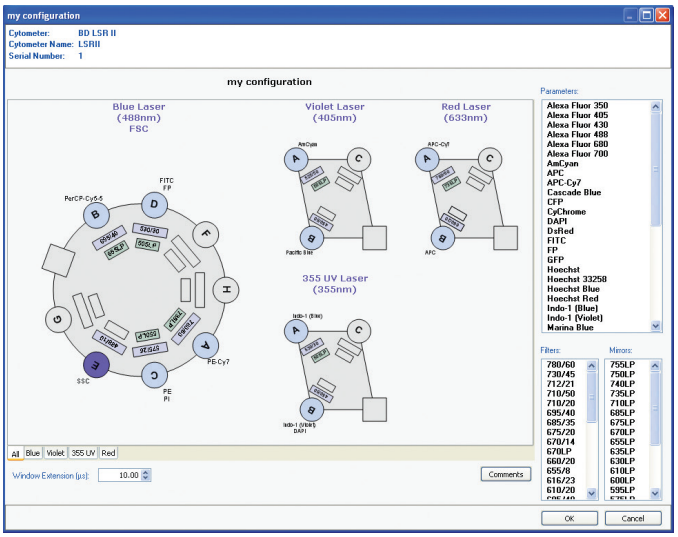
a. Under **Parameters**, drag a parameter name to a detector. Ctrl+click to add multiple parameters.

b. Under **Filters**, drag a filter or mirror to the appropriate slot.

⑧ In the bottom portion of the window, enter cytometer-specific information, such as window extension or sheath pressure, or any comments, as needed.

⑨ Click **OK** to save the edits.

⑩ Click **Set Configuration** to make the new configuration the current configuration.



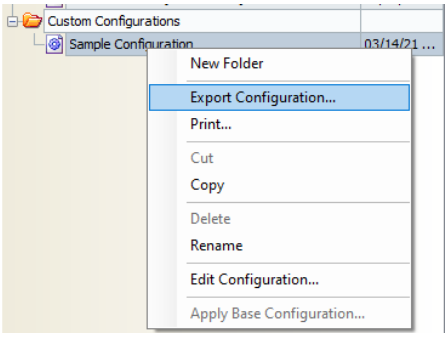
Exporting cytometer configurations

Export cytometer configurations to backup custom cytometer configurations or to import onto a different workstation.

① In the Cytometer Configuration window, right-click a configuration in the list, and select **Export Configuration**.

② Verify the file name and click **Save**.

By default, exported configurations are saved in BDExport\Instrument.



Importing cytometer configurations

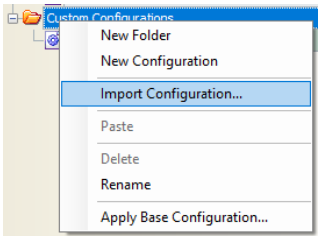
① If needed, transfer the saved cytometer configuration file to the secondary workstation.

② Log in as an administrator and select **Cytometer > View Configurations**.

③ In the Cytometer Configuration window, right-click the folder you want to import the configuration into and select **Import Configuration**.

④ Navigate to and select your saved file and click **Open**.

⑤ Click **Set Configuration** to make the imported configuration the current configuration.



Performing a baseline definition

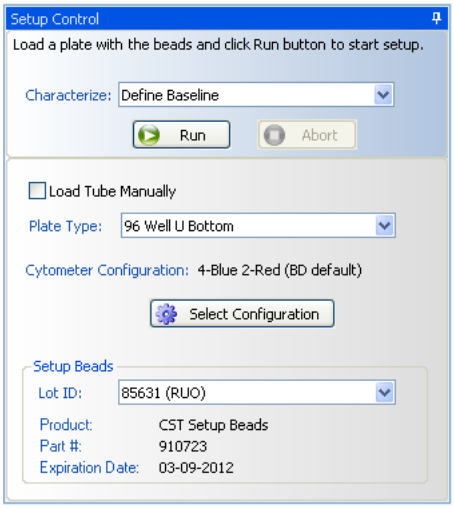
Preparing the beads

For tubes: Add 3 drops of BD FACSDiva™ CS&T Research Beads to 0.5 mL of filtered sheath fluid.

For plates: Add 1 drop of BD FACSDiva™ CS&T Research Beads and 150 µL of filtered sheath fluid to each well, A1 through A4. Load the plate onto the BD® High Throughput Sampler (HTS).

Running the baseline

① Under Setup Control, select **Define Baseline** in the Characterize menu.



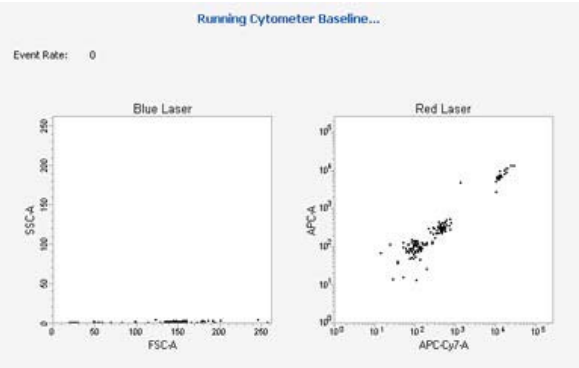
② Determine the loading method:

- Select the **Load Tube Manually** checkbox to load tubes manually.
- Clear the **Load Tube Manually** checkbox to use the BD FACS™ Loader or HTS and select the appropriate plate type from the Plate Type menu.

③ Verify that the appropriate configuration is set.

④ Verify that the appropriate lot ID is selected.

⑤ Click **Run.**

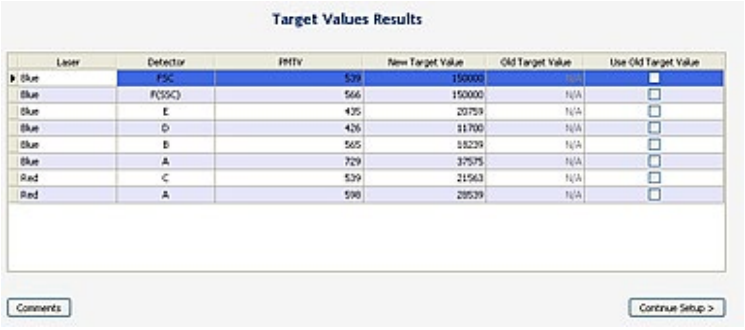


⑥ Load the sample:

- For tubes, load the tube of beads when prompted and set the flow rate to low, if needed.
- For plates, load the prepared plate onto the HTS and close the lid.

After a brief pause, the Running Cytometer Baseline window opens.

⑦ After the data samples are collected, the PMTVs Results dialog opens. Click **Continue Setup**.



⑧ When the Target Values Results dialog opens, click **Continue Setup**.

⑨ Remove the tube or plate when the software prompts you. After a baseline has been defined, a message is displayed.

⑩ Click **View Report** to go to the reports page or click **Finish** to return to the Setup View.

You will need to follow a baseline with a performance check.

Bead lot management

Whenever you receive a new lot of beads, you will need to download and import the bead lot file to ensure you have the appropriate values.

Downloading a bead lot file

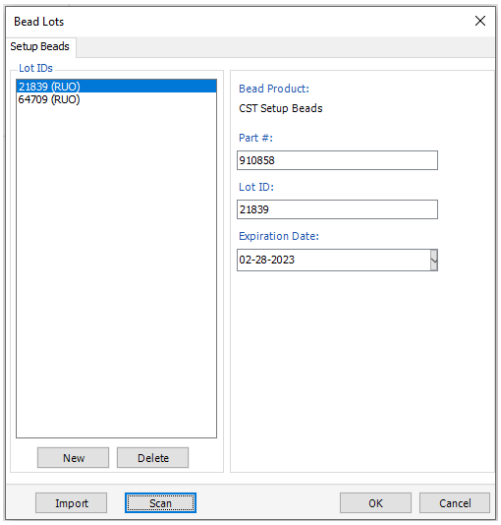
① Go to bdbiosciences.com/en-us/resources/bead-lot-files and navigate to your new bead lot number.

② Click the bead lot number to download the file.

③ Transfer the zipped file to D:\BD\FACSDiva\CST\Bead Lot.

④ Once transferred, unzip the file.

Importing a bead lot file



① In the CS&T workspace, select **Tools > Bead Lots.**

② Click **Import** in the **Bead Lots** dialog.

③ Select the bead lot file (.bls) and click **Open**.

Deleting a bead lot file

① In the CS&T workspace, select **Tools > Bead Lots**.

② Select the bead lot in the Lot IDs list, then click **Delete**.

③ Click **Yes** in the confirmation dialog.

Resetting target values

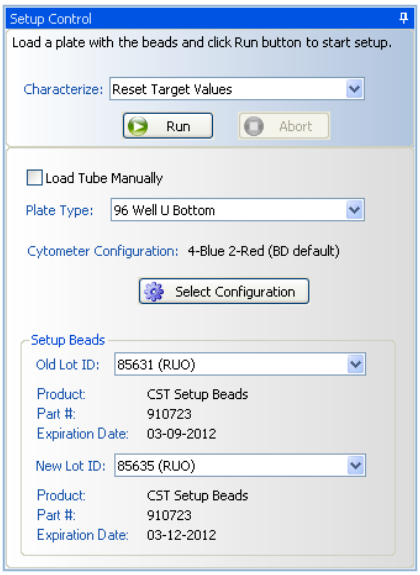
Before beginning this task, you will need both the existing (old) lot and the new lot of the BD FACSDiva™ CS&T Research Beads. Reset the target values on every cytometer configuration that has a baseline defined that you are currently using.

Preparing the beads

For tubes: Add 3 drops of the old bead lot to 150 µL of filtered sheath fluid to tube 1. Add 3 drops of the new bead lot to 150 µL of filtered sheath fluid to tube 2.

For plates: Add 1 drop of the old bead lot to 150 µL of filtered sheath fluid to well A1. Add 1 drop of the new bead lot to 150 µL of filtered sheath fluid to well A2.

Running the reset



① Select **Cytometer > CST**.

② Under Setup Control, select **Reset Target Values** in the Characterize menu.

③ Determine the loading method:

- Select the **Load Tube Manually** checkbox to load tubes manually.
- Clear the **Load Tube Manually** checkbox to use the Loader or HTS and select the appropriate plate type from the Plate Type menu.

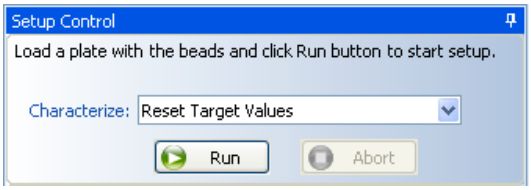
④ Verify that the appropriate configuration is set.

⑤ Verify that the setup bead lot IDs selected for the old (existing) bead lot and the new bead lot are correct.

⑥ Load the beads on the cytometer, then do one of the following:

- If you are loading tubes manually, load the tube with the old lot on the cytometer, set the flow rate to low.

  The software will prompt you when to load the tube with the new bead lot.
- If you are using the HTS, place the plate on the HTS.



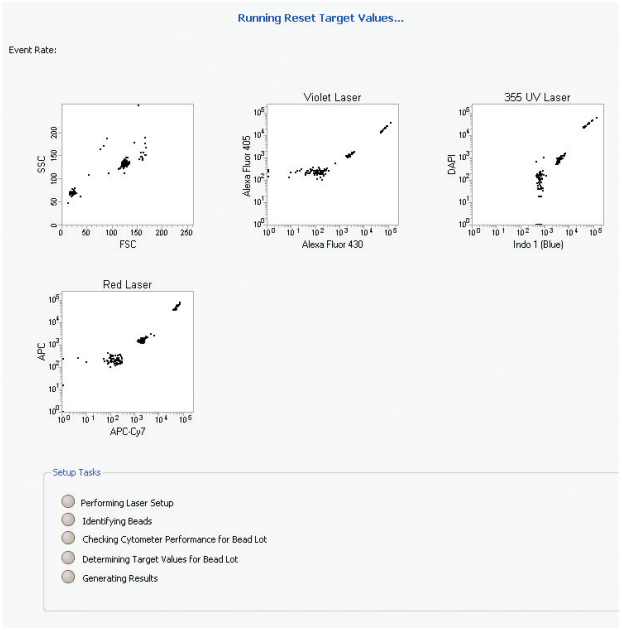
⑦ Click **Run**.

The Resetting Target Values dialog opens.

Running the reset, continued

⑧ Remove the tube or plate when the software prompts you. After the reset is complete, a message is displayed.

⑨ Click **View Report** to go to the reports page or click **Finish** to return to the Setup View.



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