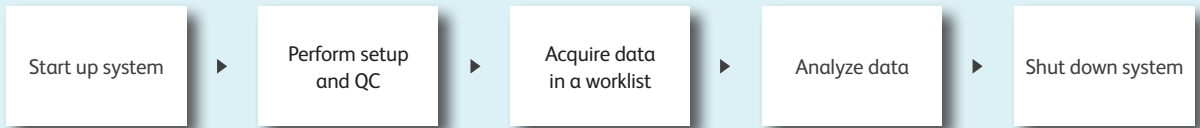


# BD FACSuite™ Software Quick Reference Guide

This guide contains instructions for a daily workflow using the BD FACSLytic™ system with BD FACSuite™ software. This workflow assumes experiment setup (reports and assays) has already been completed.

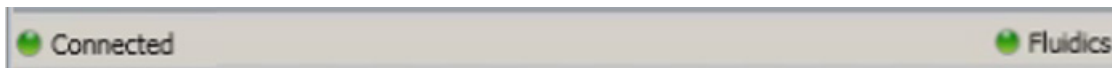
## Workflow Overview

The following figure shows the daily workflow when using BD FACSuite software.



### Start up the system

- 1 Check the fluid levels.
  - If necessary, fill the sheath tank.
  - Empty the waste tank and add 500 mL of undiluted bleach (for the 5 L tank).
- 2 Turn on power to the system by pressing the power button.
  - The power button turns green.
  - The cytometer status indicator begins blinking amber.
  - Sheath fluid is run through the system.
  - Lasers commence the 20-minute warmup.
- 3 If necessary, turn on the computer and log in to BD FACSuite software.
- 4 Verify that the software is connected to the cytometer and that the fluidics system is ready. Both are indicated by green icons at the bottom of the workspace.



# Perform Assay Setup and QC

## Performance QC

- 1 Prepare BD™ CS&T RUO Beads according to the directions in the package insert.

The screenshot shows the 'Setup & QC Options' dialog box. On the left, a navigation bar has a 'Setup & QC' button highlighted with a blue checkmark and a callout box that says 'On the navigation bar, click Setup & QC.' The main dialog box has 'Task' set to 'Performance QC' and 'CS&T bead lot ID' set to '7151720 (Expires: 6/30/2019)'. A callout box points to these fields with the text 'Select the Performance QC task and verify the CS&T bead lot ID.' Below these fields is a 'Select...' button for 'Assay Setup Reports'. At the bottom, there are 'Start' and 'Abort' buttons. A callout box points to the 'Start' button with the text 'Load the tube and click Start.'

- 2 When the task has completed, review the report.

## Assay and Tube Settings Setup

This step uses the Cytometer Setup and Tracking (CS&T) beads to determine the photomultiplier tube (PMT) voltages needed to reach the user-defined settings. To ensure that the settings used in your assay reflect the current performance of your cytometer, you need to run assay and tube settings setup before acquiring data.

- 1 Select the Assay / Tube Settings Setup task.

The screenshot shows the 'Setup & QC Options' dialog box. The 'Task' dropdown is set to 'Assay / Tube Settings Setup' and is highlighted with a callout box that says 'Select the Assay / Tube Settings Setup task.' The 'CS&T bead lot ID' is '17884 (Expires: 2/28/2020)'. Below this, the 'Assays / Tube Settings' dropdown is set to 'Select...' and is highlighted with a callout box that says 'Select Tube Settings.' At the bottom are 'Start' and 'Abort' buttons.

- 2 Select the tube settings you would like to run, load the tube, and then click Start.

The screenshot shows the 'Select Tube Settings and Assay Setup Reports' dialog box. It has a search bar 'Search by Assay or Tube Settings Name' and buttons for 'Run All Setup' and 'Generate All Reports'. There are four expandable sections for tube settings:

- 'Tube Settings: Lyse Wash' with a green checkmark and a 'Run Setup' button.
- 'Tube Settings: Lyse No Wash' with a green checkmark and a 'Run Setup' button.
- 'Tube Settings: 6-Color Stimulation' with a yellow warning triangle, a 'Run Setup' button, and a 'Generate Reports' button. Below it is a table:

Assay Name	Type	Author	Report
6-Color Stimulation UD	User-Defined	Admin User	<input checked="" type="checkbox"/>

- 'Tube Settings: Lab Practical\_HP' with a yellow warning triangle and a 'Run Setup' button.

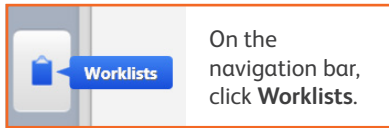
At the top right of the dialog is a 'Cancel' button.

- 3 When the task has completed, review the report.

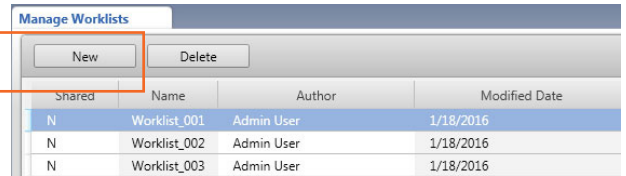
## Acquire Data in a Worklist

Once you have created an assay and defined the assay settings, you can run samples using a worklist. This workflow can be used for both a tube rack and a plate.

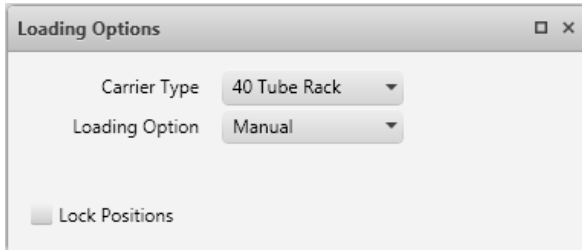
- 1 Create a new worklist.



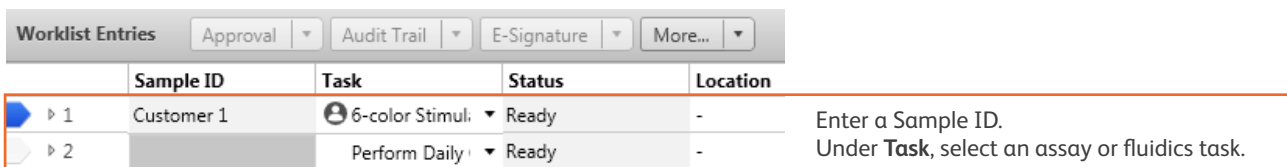
In the **Manage Worklists** tab, click **New**.



- 2 Select the **Carrier Type** and **Loading Option**.



- 3 Enter information in the **Worklist Entries** table.

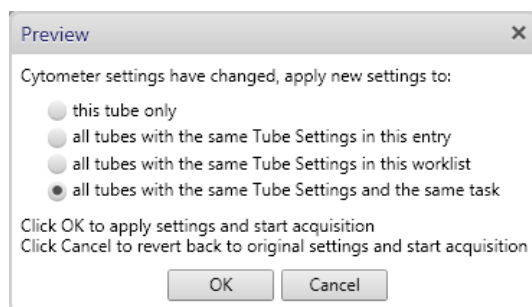


- 4 Name the worklist by selecting **File > Rename**.

- 5 Click **Run All**.

- 6 Verify gates and PMT voltages.

- If running tubes manually, when prompted, load the first tube.
- Click the **Stop Timer** button if you need more time to preview the data, then click **Resume**.
- If necessary, make adjustments to the gates and PMT voltages. If the settings have changed, choose how to apply the new settings and click **OK**.



- 7 If running tubes in manual mode, continue loading tubes as prompted until all of the tubes in the worklist have been acquired.

## Analyze Data

You can analyze any individual entry or tube that has been acquired, or use batch analysis to analyze all acquired entries in a worklist.

### Manual Analysis

- 1 In the **Worklist Entries** table, click the tube pointer next to entry 1.
- 2 Click the tab for the report you want to view. Verify gates and adjust if needed.
- 3 Select the next tube from the **Current Tube** menu.
- 4 Once you have reviewed the tube(s) from the entry, click **Approved**.
- 5 (Optional) If you selected the E-signature assay property, you will be prompted to enter a password. Enter the log in password and any comments, then click **Sign**.
- 6 Repeat steps 1 through 5 to analyze data from any additional entries.

### Batch Analysis (Optional)

NOTE The batch analysis feature can only be used once all entries have been approved.

- 1 In the Worklist Entries table, click the tube pointer next to entry 1.
- 2 Click **Run All** on the Worklist control bar.
- 3 Batch analysis begins and analyzes entries and tubes with acquired data. Use the **Stop Timer** button to pause the analysis and make any necessary changes.

## Shut Down the System

- 1 Prepare a tube containing 2 mL of a 10% bleach solution and a tube containing 3 mL of deionized (DI) water.
- 2 From the menu bar, select **Cytometer > Daily Clean**.
- 3 Cleaning can be completed either by manual tube loading or by using the BD FACS™ Universal Loader.

For Manual Tube Loading	For Automatic Tube Loading
<ul style="list-style-type: none"><li>• Load the 10% bleach tube on the manual tube port.</li><li>• When prompted, load the DI water tube. If prompted, click <b>Continue</b>.</li><li>• The dialog closes when the process is complete.</li></ul>	<ul style="list-style-type: none"><li>• In the <b>Daily Clean</b> dialog, select <b>Universal Loader</b> and the 30- or 40-tube rack option.</li><li>• Place the 10% bleach tube in position A1 and the DI water tube in position A2 of the rack.</li><li>• Load the tube rack. If prompted, click <b>Continue</b>.</li><li>• The dialog closes when the process is complete.</li></ul>

- 4 Leave a tube containing 2 mL of DI water on the manual tube port.
- 5 Select **Cytometer > Shutdown**.
- 6 Exit BD FACSuite software and then turn off the computer.

This material is for training purposes.

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