

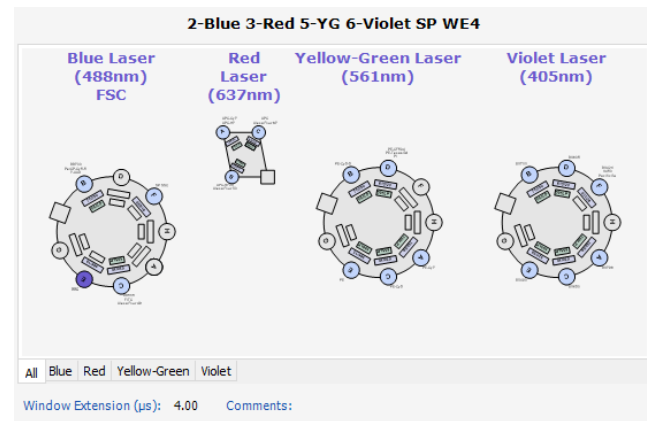
Job Aid

BD FACSymphony™ A1 System: Creating the small particle detector QC experiment template

This job aid contains instructions for creating a QC experiment template to use as part of your daily setup process when using the BD® Small Particle Detector (SPD) with the BD FACSymphony™ A1 Flow Cytometer. This procedure only needs to be performed once, the template can be reused by any user. See the Small particle detector chapter in the *BD FACSymphony™ A1 Flow Cytometer user guide* for more information.

Before you begin

Verify that an appropriate small particle detection cytometer configuration has been created. You will need a cytometer configuration with SP-SSC and BB515 parameters and the window extension set to a value of 4.

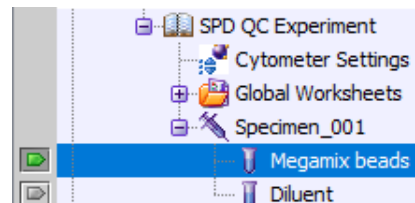


Creating the experiment template

You will create, then export the template you will use to perform QC on the SPD.

Creating an experiment

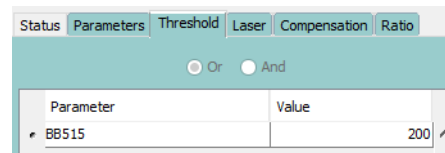
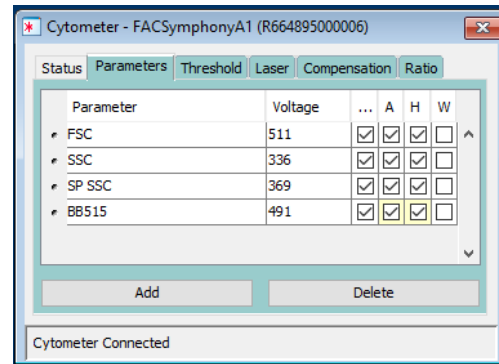
- 1 Ensure that your current configuration is appropriate for small particle detection.
- 2 In BD FACSDiva™ Software, create a new experiment with two tubes.
- 3 Rename the tubes *Megamix beads* and *Diluent background*, respectively.
- 4 Set the current tube pointer to the Megamix beads tube.



Selecting parameters

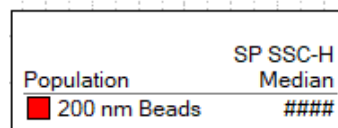
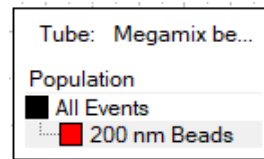
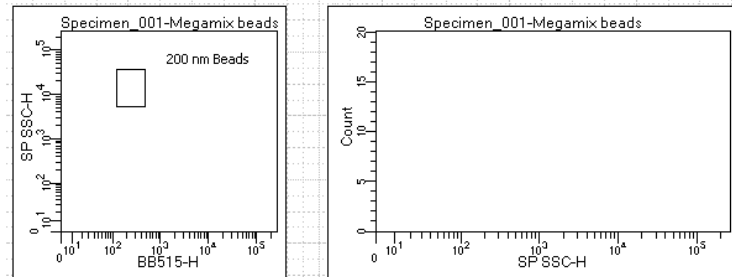
Make the following changes in the Cytometer or Inspector windows:

- ① In the Parameters tab, delete all parameters except FSC, SSC, SP SSC, and BB515.
- ② Ensure Height and Log are selected for the parameters.
- ③ In the Threshold tab, select parameter **BB515** and set the threshold value to **200**.
- ④ In the Laser tab, verify that the window extension value is 4.



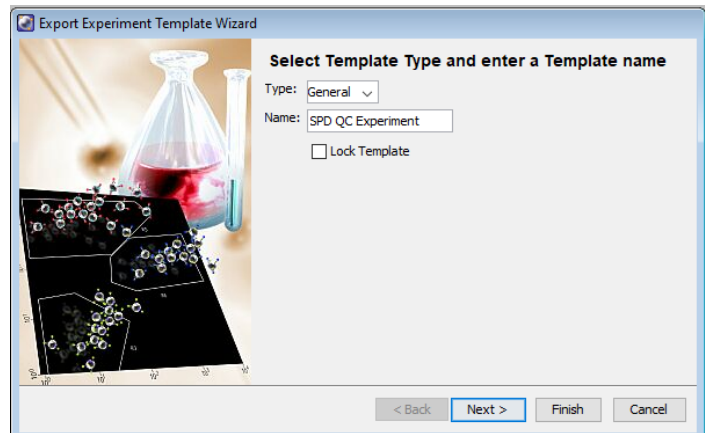
Creating worksheet elements

- ① Create a dot plot. Change the y-axis to SP SSC- H and the x-axis to BB515-H.
- ② Create a histogram. Change the x-axis to SP SSC-H.
- ③ Select both plots. In the Inspector window, under Biexponential Display, select the X Axis and Y Axis checkboxes.
- ④ Create a rectangle gate on the BB515-H vs SP SSC-H dot plot.
- ⑤ Right-click either plot and select **Show Population Hierarchy**.
- ⑥ In the population hierarchy, select the P1 gate and rename it 200 nm Beads.
- ⑦ Create a statistics view to display the SP SSC-H median for the 200 nm Beads population:
 - a. Right-click either plot and select **Create Statistics View**.
 - b. Right-click the Statistics view and select **Edit Statistics View**.
 - In the Populations tab, select the 200 nm Beads population.
 - In the Statistics tab, select the Median checkbox for the SP SSC-H parameter.
 - Click **OK**.



Exporting the experiment template

- ① Right-click the experiment and select **Export > Experiment Template**.
- ② Name the template *SPD QC Experiment*.
Do not lock the template, you might want to resave the template after the final adjustment of the 200 nm bead gate.
- ③ Click **Finish**.



This material is for training purposes.
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