

February, 2017

## Stem Cell Enumeration SOP 5: BD FACSCanto™ II Cytometer Shutdown Procedure

### Purpose

To shut the flow cytometer and computer down after completing the acquisition of stained samples or analysis of data files.

### Scope

This procedure applies to the clinical laboratory environment with the BD FACSCanto™ II flow cytometer for the purpose of CD34 enumeration using whole blood, bone marrow (fresh or thawed), cord blood (fresh or thawed), leucopheresis (fresh or thawed) specimens. We recommend that all personnel who operate the instrument be sufficiently trained to fully perform and implement this guideline.

### Equipment Required

BD FACSCanto II flow cytometer  
BD FACSCanto II workstation

### Materials Required

Biohazard safety manual  
Biohazard sharps waste container  
Personal protective equipment (PPE)

- Protective gloves
- Protective eyewear
- Closed-toe shoes
- Lab coat

BD FACSTFlow™ sheath fluid (Catalog No. 342003)  
BD FACS™ Clean solution (Catalog No. 340345) or 10% bleach  
BD FACS™ Shutdown solution (Catalog No. 334224)  
BD FACS™ Rinse solution (Catalog No. 340346)  
Deionized water

### Procedure

#### Shutdown in BD FACSCanto™ clinical software

1. In the **Sample ID** column, enter the word *Clean*.
2. Select the *4-color TBNK +TruC* panel.
3. Put a tube containing 3 mL of 10% bleach or BD FACS Clean solution for the first tube of the panel in the carousel.
4. Put a tube containing 3 mL of deionized water for the second tube of the panel in the carousel.



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5. Ensure that the tube guide is around the SIT.
6. Install the carousel on the Loader and close the doors.
7. Click **Run**. The cleaning solution will run until it reaches the set stopping time for that tube (the default is five minutes per tube).
8. To exit the software, select **File > Exit**. A dialog opens asking whether you want to exit with fluidics shutdown or exit only. Select **Exit with Fluidics Shutdown**.
9. After fluidics shutdown is complete and BD FACSCanto clinical software has closed, turn the cytometer main power off.

### Shutdown in BD FACSDiva™ software

To clean the cytometer with three cleaning tubes, use BD FACSDiva software.

1. Start BD FACSDiva software.
2. Enter the appropriate user login and password information.
3. Wait for the software to connect to the cytometer. A green light will be displayed in the bottom right-hand corner of the window. The word *Connected* will also be displayed.
4. Go to the **Carousel** menu and select **Carousel Clean**.
5. Select the checkbox beside each tube and select the appropriate time for each, typically five minutes.
6. Place a tube containing 3 mL of BD FACS Rinse solution in position 1 of the carousel.
7. Place a tube containing 3 mL of BD FACS Clean solution or 10% bleach in position 2 of the carousel.
8. Place a tube containing 3 mL of deionized water in position 3 of the carousel.
9. Click **Run**. A dialog opens to confirm that the three tubes are in the correct location.
10. Click **OK**. During the cleaning a status bar will be displayed.
11. A dialog will open when the cleaning is complete. Click **OK**.
12. Select **File > Exit**.
13. A dialog will be displayed asking whether you want to exit with fluidics shutdown or exit only. Select **Exit with Fluidics Shutdown**.
14. After the fluidics shutdown is complete and BD FACSDiva software has closed, turn the cytometer main power off.

### References

*BD FACSCanto™ II Instructions for Use*, document 23-12882-01.

*BD FACSCanto™ Clinical Software Reference Manual*, document 23-14529-00.

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