

Job Aid

BD FACSDiscover™ S8 Cell Sorter: Aerosol management systems

This job aid contains instructions for safely evacuating aerosols from the sort chamber of the BD FACSDiscover™ S8 Cell Sorter. For additional information, see the *BD FACSDiscover™ S8 Cell Sorter with BD CellView™ Image and BD SpectralFX™ Technology User's Guide*.



Before you begin

- If your cell sorter is installed in a biological safety cabinet: Ensure that the Baker Biological Safety Cabinet (BSC) has been certified for air flow and for compliance to NSF/ANSI Standard 49, or any other official standards applicable to biological safety cabinets in your country.
- If your cell sorter is not installed in a biological safety cabinet: Ensure that the BD® Aerosol Management Option (AMO) has been properly installed. See your instrument user's guide for more information.
- Remove the three screws located on the top section of the tube collection device to allow air circulation within the sort block and the sort collection chamber.

Working with the BD® Aerosol Management Option (AMO)

The AMO is intended as a standalone option for instruments not installed in biological safety cabinets.

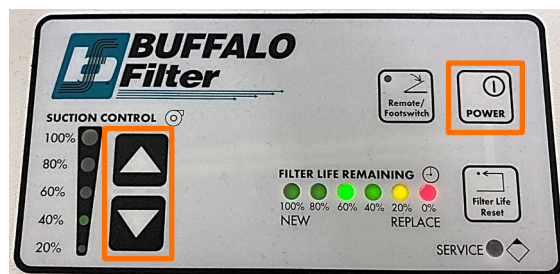
Using the AMO

1. Turn on the AMO unit.

NOTE Always start up the AMO unit before setting up for sorting.



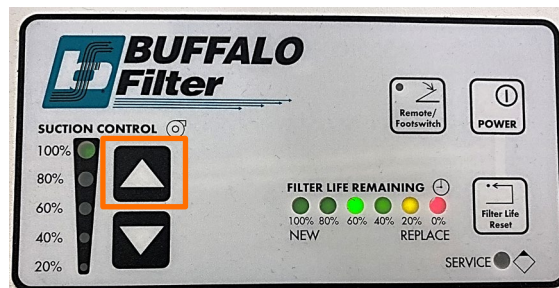
2. Operate the AMO unit at 40% during sorting.
Press the up or down arrow to set the suction control rate.
3. Turn off the AMO unit when you have completed your work.



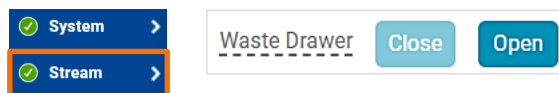
Responding to a nozzle clog during a sort with the AMO

If the stream is disturbed during the sort due to a clogged nozzle, the sort procedure is designed to stop automatically and block the sort tubes. The sort will not restart until you clear the clog. In the event of a nozzle clog, do not open the sort collection door or access the sort tubes before following this procedure.

1. If the stream has not already shut down automatically, turn off the stream.
2. Increase the air evacuation rate on the AMO unit to 100%.



3. In the Stream View window, click **Open** to open the aspirator drawer.



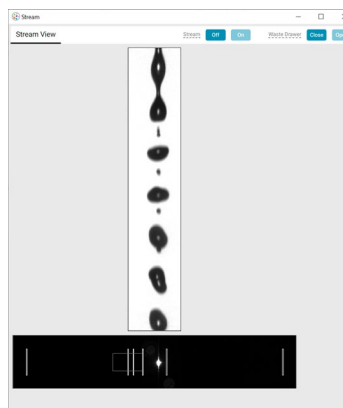
4. Wait for 1 minute.
This procedure will minimize aerosols from the sort collection chamber.



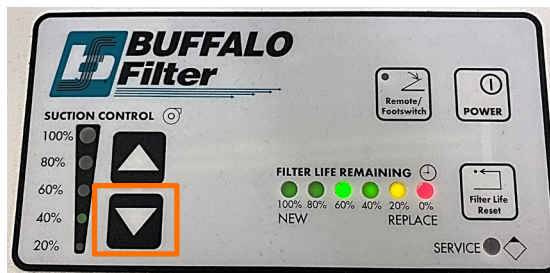
5. In the Stream View window, click **Close** to close the aspirator drawer.

6. Recover from the clog:
 - a. Remove and sonicate the nozzle in deionized (DI) water to clear the clog.
 - b. Open the sort block door and dry the deflection plates, nozzle lever, and other surfaces as necessary.
 - c. Reinsert the nozzle. Start the stream to verify the clog has been cleared.

NOTE A drop delay must be rerun after any stream restart, before you can resume a sort.



7. Set the AMO unit back to 40%.
8. Close the sort block and sort collection chamber doors.



Working with the Baker Biological Safety Cabinet (BSC)

The Baker BSC includes a built-in Aerosol Management System (AMS).

Using the BSC

1. Turn on the blower at least 3 minutes before powering on the cell sorter.
2. Set the sash to the correct height.
3. Verify that the laminar air flow is working.
4. Turn the AMS to Low during sorting.



5. Verify that there are no alarms.
6. Turn off the AMS and the blower when you have completed your work.

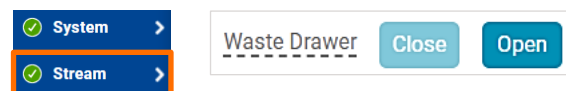
Responding to a nozzle clog during a sort with the AMS

If the stream is disturbed during the sort due to a clogged nozzle, the sort procedure is designed to stop automatically and block the sort tubes. The sort will not restart until you clear the clog. In the event of a nozzle clog, do not open the sort collection door or access the sort tubes before following this procedure.

1. If the stream has not already shut down automatically, turn off the stream.
2. Turn the AMS to High.



3. In the Stream View window, click **Open** to open the aspirator drawer.



Responding to a nozzle clog during a sort with the AMS, continued

- Wait for 1 minute.

This procedure will minimize aerosols from the sort collection chamber.

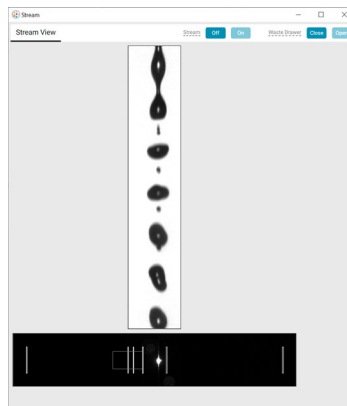
- In the Stream View window, click **Close** to close the aspirator drawer.



- Recover from the clog:

- Remove and sonicate the nozzle in deionized (DI) water to clear the clog.
- Open the sort block door and dry the deflection plates, nozzle lever, and other surfaces as necessary.
- Reinsert the nozzle. Start the stream to verify the clog has been cleared.

NOTE A drop delay must be rerun after any stream restart, before you can resume a sort.



- Set the AMS back to Low.

- Close the sort block and sort collection chamber doors.



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