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## Manual Aseptic Sort Procedure for BD FACS Aria II/III/Fusion

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**Protocol status:** Working

**We use this protocol and it's working**

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### Abstract

This is an alternative to the automated aseptic sort procedure designed to decontaminate the lines of the BD FACS Aria Fusion instrument. Bypasses filters and other internal components that may be damaged by 10% bleach or FACSClean. This protocol is useful if the connections used for the aseptic sort on the wetcart have failed and the procedure needs to be performed before a service call can be placed.



## Materials


One spare 10L Stainless Steel Sheath Tank Assembly (BD Biosciences)

BD FACSClean or 1 gallon of Bleach

One BD FACS Aria Nozzle of any size; ideally a damaged one that is no longer used for sorting but that is designated for use only in cleaning procedures

DI water from a MilliQ or similar dispenser

## Safety warnings

 Wear safety glasses when handling bleach in order to protect your eyes from splashing.

## Before start

Autoclave or chemically decontaminate a spare stainless steel tank for your instrument before starting. Perform as many tasks as possible within a biosafety cabinet.



- 1 Perform decontamination of tank (see SOP). The preference is to use a spare 10L main tank when performing this procedure.
- 2 Fill the tank with 4L of 10% bleach.
- 3 Connect the air line and the sheath line directly to the tank. Do not connect the filter as it cannot withstand bleach.
- 4 Place an already damaged nozzle designated specifically for cleaning procedures (not the closed loop or nozzles to be used during sort) on the instrument. Even though it is a cleaning nozzle that should have only had cleaning solutions run through it, sonicate the nozzle for 1 minute before use as aggregates can still form and block the orifice.
- 5 Turn on the stream. Run the stream of bleach for 20 minutes.
- 6 After 20 minutes, turn off the stream.
- 7 Disconnect the tank, empty it into the sink. Rinse the tank well with DI water 2x.
- 8 Fill the tank with 4L of DI water directly from dispenser.
- 9 Connect the air line and the sheath line directly to the tank. Do not connect the filter.
- 10 Turn on the stream. Run the stream of DI water for 20 minutes.
- 11 After 20 minutes, turn off the stream.
- 12 Disconnect the cleaning tank.
- 13 Place a freshly decontaminated tank with sterilized sheath onto the wetcart. Connect the air line and the sheath line (with or without filter depending on the experiment protocol) and perform a regular fluidics startup using the closed loop nozzle. Or, if the instrument will be shut down, perform a regular fluidics shutdown.



## Protocol references

**BD Application Note, Aseptic Sort Procedure**

**BD FACSAriaIII User's Guide**