

LSR II Basic Troubleshooting Guide – Updated April, 2016

This guide is designed to aid the user in doing basic troubleshooting on the LSR II. It is based on the most common issues that we come across in the core and are asked to rectify. The goal of this guide is to hopefully get you up and running as soon as possible without intervention.

Aaron Rae, Technical Director, Emory + Children's Pediatric Flow Cytometry Core

1. Fluidics System

Incorrect Sample Tube or Cracked Sample Tube – BD352052 or BD352235 Polystyrene Tubes are the only tubes that should be used on the LSR II (And also the Canto II).



Correct - BD352052



Incorrect - Polypropylene



Incorrect – Cracked

Check your tubes for cracks, even small cracks can prevent the tube from being pressurized and therefore affect sample flow.

Blockages

Prime the instrument at least two times, if this does not work talk to a member of staff.

Waste Tank Connection Problems – Check Waste Tank Connectors



Correct



Incorrect



Incorrect

Sheath Tank Lid Problems – Check Sheath Tank Connectors

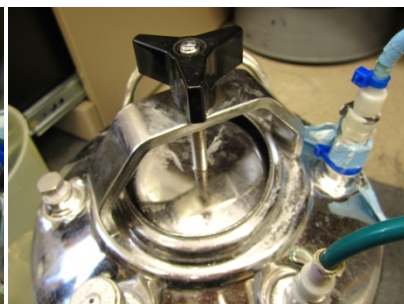


Correct- O-Ring Placement

Sheath Tank Lid Issues – Check Lid is Sealed Properly and O-Ring is still in correct position



Correct

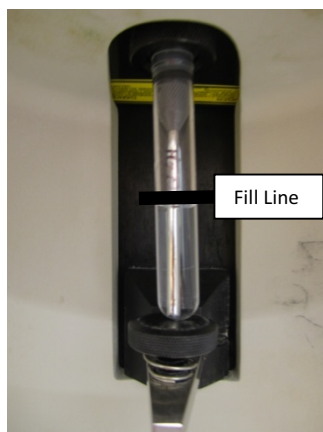


Incorrect – Lid Not Shut Fully



Incorrect – Lonely O-Ring!

Overfilled Tubes – Leads to blockage of pressurization hole therefore incorrect pressurization of tubes.
(Maximum 3mL in tube as stated in SOP)



Correct

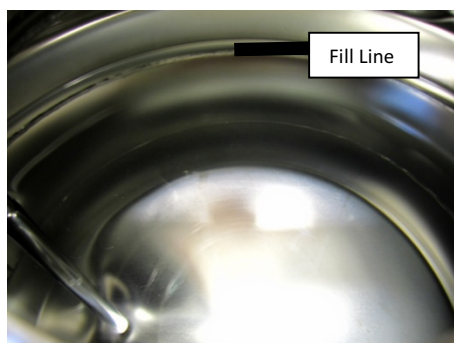


Incorrect

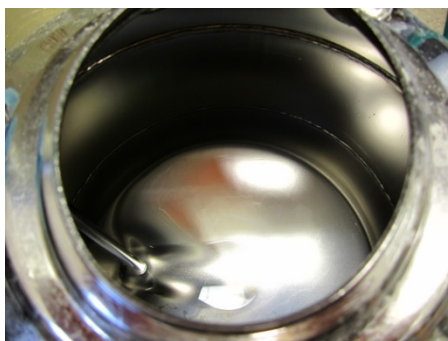
Air in the Sheath Filter – Remember to Bleed and Air from the Sheath Filter – Large Air bubbles will lead to decreased flow or possible blockages.



Instrument Run Dry



Correct



Incorrect

2. Software

Blank FACS DiVa Screen or Software Not Responding

Most software issues can be resolved by restarting the computer. If you have connection issues after restarting the computer then switch off the cytometer, wait 5 minutes and then turn it back on, connection is usually restored in about 5 minutes,

Unable to Acquire Samples

The most common issue for not being able to acquire data is your tube is not selected.

Selected

Not Selected



Unable to Calculate Compensation

The most common causes of compensation failing to work are the following:

There has been a voltage change on one of the fluorescence channels, please set your voltages correctly and do not change them while running comp controls (Changing FSC and SSC voltages is OK).

If a member of STAFF is not available, please Call Becton Dickinson on the following number quoting our SERIAL number (found on the notice boards throughout the lab):

Becton Dickinson Service Line: 1-877-232-8995 (Option 2)