

BD Celesta Instrument Guide



CYTOMETER

Components

1 Green button

Power button. Let lasers warm up for at least 15mins.

2 Control panel

Fluidics controls

3 Sample injection port (SIP)

Tube of water in standby mode when instrument is not in use. *At startup, run water during laser warm up.

4 Optics access door

3-laser 12-color system. See Configuration & Panel Tips guide

***Cytometer is equipped with High Throughput System (HTS)**

See HTS guide for details.



Fluidics Cart

6 On/Off

Remains on.

7 Sheath

Sheath box pumps sheath fluid into 8 Plemnum which feeds sheath into the cytometer

9 Waste

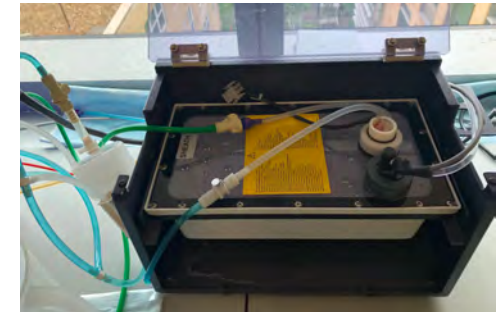
Disconnect from probe. Do not remove filtered cap.

-Check fluid levels on sheath box and waste before use

Tube mode: Use unlabeled sheath boxes

Plate mode: Use red labeled (sheath w surfactant) boxes

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Celesta Troubleshooting

-Acquisition: No events and RUN button is GREEN

Cracked Tube

Use correct falcon tubes

Sample is not mixed properly

Mix the sample to suspend the cells. Filter if necessary

Air bubbles in the flow cell or sheath filter

Flow cell-prime twice (no more than twice)

Sheath filter-bleed filter (roller clamp connected to blue tubing)

Clogged sampe line

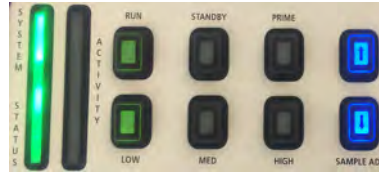
Run 3ml bleach w/ arm open, run 7 mins with arm closed

Run 3ml water w/ arm open, run 15 mins with arm closed

Use stylus if necessary

PMT voltages set too low or too high for display parameter

Adjust the PMT voltage



-Acquisition: No events and RUN button is ORANGE

Cracked Tube

Use correct falcon tubes

Sample tube is not properly seated

Make sure tube is in place as high as possible

Sheath container is not pressurized

Make sure plenum probe and sensor are tightly sealed

Air leak at sheath container

Check plenum for leaks and bubbles

Plenum is empty

Replace empty sheath box

Ensure cart is pumping sheath into plenum

*If the cart isn't working, use PBS bottles to fill plenum manually

Bal seal is worn

Replace the Bal seal (spring side up)



-Droplets are visible on the SIP

Outer sleeve is not seated in the retainer or is not on the SIP

Loosen the retainer->reset the sleeve->tighten to the retainer

Waste line is pinched, preventing proper aspiration/Waste is full

Check waste line and/or empty waste

Black Waste line is clogged

Run 3-4ml bleach w/ arm open

Worn O-ring in the retainer

Replace O-ring

Droplet containment vacuum is not functioning

*Requires engineer



-Low event rate

Air bubbles or debris in flow cell

Prime fluidics (no more than twice)

Clogged sampe line

Remove sample to allow back flushing

Run 3ml bleach w/ arm open, run 7 mins with arm closed

Run 3ml water w/ arm open, run 15 mins with arm closed

Use stylus if necessary

-Erratic event rate

Sample tube is cracked

Replace sample tube

Air bubbles or debris in flow cell

Prime fluidics (no more than twice)

Clogged sampe line

Run 3ml bleach w/ arm open, run 7 mins with arm closed

Run 3ml water w/ arm open, run 15 mins with arm closed

Use stylus if necessary

Bal seal is worn

Replace the Bal seal (spring side up)

-Disorted scatter parameters

Air bubbles in the flow cell or sheath filter

Flow cell-prime twice (no more than twice)

Sheath filter-bleed filter (roller clamp connected to blue tubing)

Air leak at sheath container

Check plenum for leaks and bubbles

Dirty flow cell

*Requires a monthly clean

Bal seal



O-ring



Stylus

