

Preparation Checklist



- CellCarrier
- FlicXX (channel dimension: 25-95% of cell diameter)
- 2x blunt fill needle
- 2x 5 ml syringe, Luer Lock
- 2x 1 ml syringe, Luer Lock
- 3x Tubing of approp. length
- 2x Fitting, 2x Ferrule, 2x Adapter



- StarterKit manual for detailed handling of microfluidic parts and cleaning of tube

Sample

1. Check your sample requirements
2. Spin and resuspend cells in CellCarrier



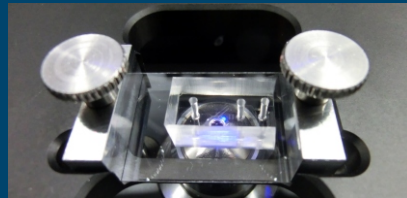
Desired sample values:
Cell concentr. min 1M /ml, opt 3M /ml
Cell count min 100k, opt 2M
Sample volume min 50 µl, opt 500 µl

Power on

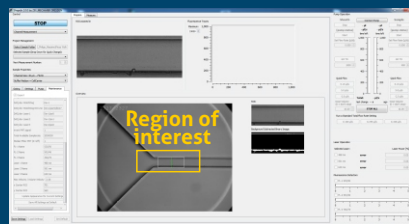
1. AcCellerator switch turns on: microscope, XY stage, syringe pump, camera, illumination
2. Computer power directly on the PC
3. HeatModule switch powers HM, to turn on HM also switch the button on the front of the HM
4. FluorescenceModule switch turns on the FM (check indicator LED at EBox)

Check image

1. Start Shape-In
2. Activate the „Prepare“ tab
3. Place a FlicXX on the stage and fix it



4. Find channel using XY stage
5. Focus channel
6. Align channel along the region of interest (ROI) using the sample rotation system
7. Position the ROI at the exit of channel



Too dark? Low contrast?
Read the troubleshooting

Syringe Pump

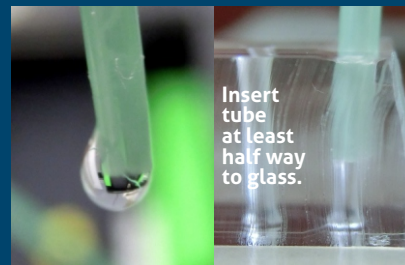
1. Press „Connect Pump“
2. Syringe piston holder position = Level in the software? No -> see the Troubleshoot: Recalibration
3. Take up CellCarrier/Sample
4. Remove air bubbles



5. Connect tubing via adapter
6. Move piston holder to syringe fill pos.



7. Fix syringe in syringe pump
8. Fill tube at 3 µl/s until drop forms
9. Slow down to 0.1 µl/s

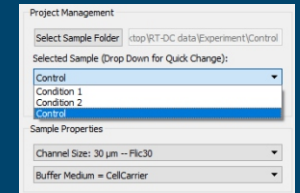


10. Plug tubing into FlicXX
- While pumping with 0.1 µl/s connect:
- 1) Sheath tubing (wait until FlicXX filled)
 - 2) Waste tubing
 - 3) Sample tubing
 - 4) Wait 100 s for the cells to arrive in ROI
 - 5) Set measurement flow rate
 - 6) Wait 60 s for equilibration

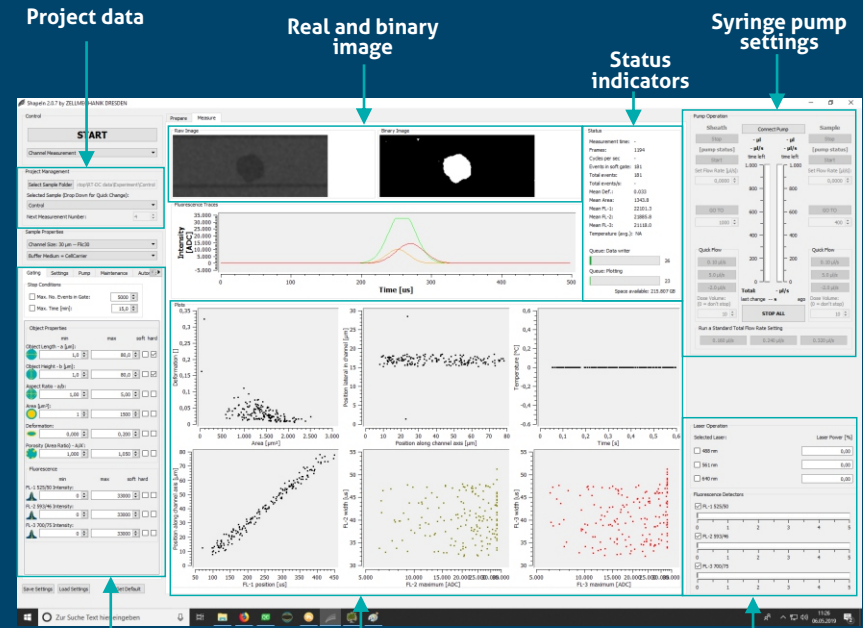
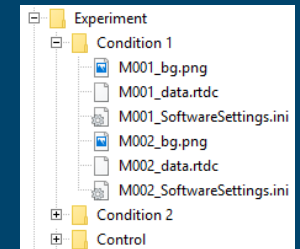
READ THE SAFETY INSTRUCTIONS

Shape-In

1. Press „Select sample Folder“ and create folders as needed
2. Choose the utilized channel dimension (e.g. Flic20 = 20 µm channel)
3. Choose if you measure in channel or in reservoir. Default gates are set for your choice. Changes can be made.
4. Check alignment of channel in ROI
5. Check the flow rate settings
6. Press „Start Measurement“
7. Press „Stop Measurement“



Data structure:



Measurement settings

Data plots

Fluorescence Controls