

1. Turn on mass photometer instrument power. Power switch on left side of back of silver electronics box. Will turn on Red focusing laser.
2. Turn on computer and login
3. Open Acquire software and make a folder with the current date (YYYYMMDD) in the requested box. Will turn on Green scattering laser. Allow to warm up for 1 hour
4. Gently open the Photometer cover.
5. Place one small drop of immersion oil on microscope objective.
6. Carefully place one cleaned coverslip containing one centered silicon gasket having 4 wells (2x2) on the objective. Coverslip glass on the objective with gasket wells on top facing up. (See Slide Preparation below)
7. Secure cover slip to microscope stage by using two small silver magnets at opposite diagonal corners of the coverslip.
8. Center one of the gasket wells over the red focusing laser by gently moving the coverslip from the edges with your fingers.
9. Carefully pipet 15-20 uL of buffer into the well that is over the focusing laser without touching the coverslip or wells.
10. GENTLY close the Photometer cover.

FOCUS ADJUSTMENT

11. Make sure the Focus Lock Lower Right) is disengaged (greyed out, if it is orange click on it to turn off)
12. Select the Native button in the upper left corner of the window. Using the 'Coarse' focus controls on the right, make adjustments until you can visualize a complete, bright, uniform, thin circle around the purple dot in the autofocus display at the lower left, and a uniformly rough surface of the coverslip in the upper display.
- 12a. If there is noticeable large high contrast discontinuities (dirt, bubble or edge of well) then click on the Lateral Control button and use the arrow buttons to locate a more uniform area of the coverslip.
13. Optimize focus by clicking on the 'Sharpness' (above the focus controls) button to display the sharpness monitor and locate the global maximum using the slider to the right of the Fine Focus Controls. Adjust this by using the Fine Focus arrows). When the maximum is located quickly press in order 'Set Focus' and 'Lock Focus'. The 'Signal ' indicator should be in the Blue region. If it is Orange, i.e. out of range then move to another area of the slide (step 12a) and repeat steps 11-13
14. Examine the cleanliness of your buffer by selecting the Ratiometric Display button (upper left)
15. Enter the desired length of recording at the lower right of the display panel.
16. Gently open the Photometer cover and pipet your sample into the well containing the existing drop of buffer. Mix by pipetting up and down, being careful to avoid the introduction of bubbles.
17. Quickly reoptimize the Fine Focus by unlocking the Focus Controls and repeating step 13. Then quickly clicking in order Set Focus and then Lock Focus and then the RECORD button (under the slide display).