

Dynamic Light Scattering (DLS) Standard Operating Procedure

Sample Preparation:

1. Carefully dispense your sample solution into an appropriate well-plate (available in the chemical stockroom).
 - Note: Try to avoid making bubbles
2. Open the door of the DLS by pressing the “Door” button on the bottom-right of the touch-screen.
3. Place the well-plate inside of the DLS, making sure that A1 on the well-plate is aligned with the A1 on the plate-holder.
4. Press the “Door” button again to close the DLS.
 - Wait for the green “Closed” signal to appear on the screen.

Data Collection:

1. Open the “Dynamics” software on the computer terminal.
2. For preset experiments, go to File > “Open Preset”.
 - Note: For help with a custom experiment, please contact the CBIC staff
3. Once an experiment is loaded, you can use the left sidebar to set the preferences and parameters.
 - Under “Parameters” > “Sample” > “Solvent”, choose your solvent from the drop-down menu. Alternatively, fill in the fields for the solvent’s properties. These values can be saved as a new solvent for later use.
 - Under “Event Schedule”, you can set the wells of interest and other automatic features.
 - The well selected under “Move to well” is where the DLS will begin collecting data from.
 - “Do” gives the number of wells to have data collected. The plate reader moves in columns of the same letter, so with “Do” set to 10, and “Move to well” set to A1, the DLS will collect data for A1-A10.
 - The “Set temperature” of 25°C and a “Wait” time of 5 minutes are recommended for most samples.
 - Click “Save data as” to choose a name and location for your data.
4. Click the “Connect to hardware” icon in the top left part of the screen, and after it finishes loading, click the green start button.
5. After the DLS is done collecting data, you can view your data through the “Measurements” sidebar, which has a variety of different tools available.
6. To export any of your data, right-click on the center of the graph and click “Export”. Name the *.CSV file and click “save”.

Shutting Off:

1. Please remove your plate from the DLS.
2. Sign out on the sheet next to the DLS.