

## Chirascan Circular Dichroism Spectrometer (CD) Standard Operating Procedure

### Starting Procedure:

1. Purge the system with N<sub>2</sub> for 30 minutes. This clears the system of O<sub>2</sub>, which can be damaging to the machine.
  - Open the large tap on top of the N<sub>2</sub> tank and the smaller black one on the hose
2. Start the instrument software, called "Instrument Start-up and Shut-down"
  - On the top left part of the application window, make sure the controller is connected to "COM10". If it is not, select it from the drop-down menu and click "Connect".
3. Click "Start Lamp Ignite Sequence"
  - Never click "Lamp Immediate Start"
  - The controller will automatically purge the instrument and ignite the lamp.
4. The next screen presents you with the parameters you can adjust for your experiment.
5. Click "Pro-Data Viewer," the folder-and-magnifying-glass icon at the top, then click the "browse" icon. Choose or create a folder to put your data, by right-clicking on the folder and selecting "Set Working Directory Here." This chooses a place for your data to be saved.
6. If you want temperature control:
  - I. Turn on the temperature controller (blue face rectangular box), with the switch on the back left
    - ❖ Also turn on the water circulator (white box on the floor with hoses running out of it) so that the system doesn't overheat.
  - II. A button on the parameters screen allows you to change the temperature settings, including temperature ramping.

### Sample Preparation:

1. Choose a path length
  - There are multiple sizes of cuvette to choose from for your sample.
2. Set up your desired experimental parameters.
3. Take a baseline reading. The button is located on the left side of the parameters screen. It should take about 30 seconds.
4. Open the door on the right of the machine, and place your sample inside, using spacers as necessary. Close the lid.
5. Change the filename and other meta information, and click "Acquire" on the bottom right of the parameters screen. The collection should take about 30 seconds.
6. Access the collected data using the "Pro-Data Viewer".

### Shutting off:

1. Go back to "Instrument Start-up and Shut-down" and click "Turn off Lamp and N<sub>2</sub>".