

SpectraSuite Spectrometer

Step-by-step instructions

1. Launch the SpectraSuite software.
2. Calibrate the Instrument:
 - a. **Step One: Check the lamp intensity**

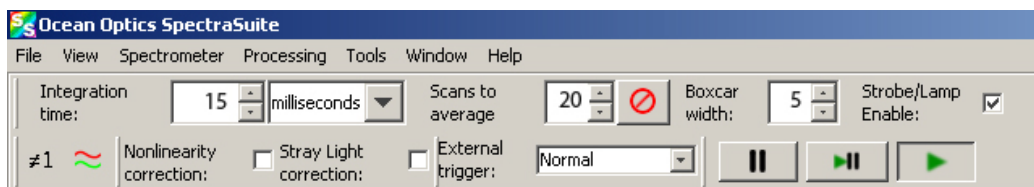
Initial instrument settings:

Integration time - 15 milliseconds

Spectra averaged - 20

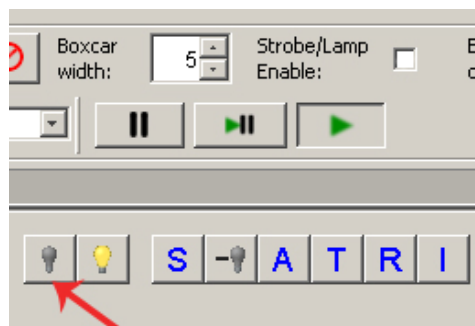
Boxcar average - 5

Check Strobe/Lamp enable. If the peak intensity on the screen is not around 3500 counts, adjust the integration time until the maximum intensity is between 3500 and 4000 counts.



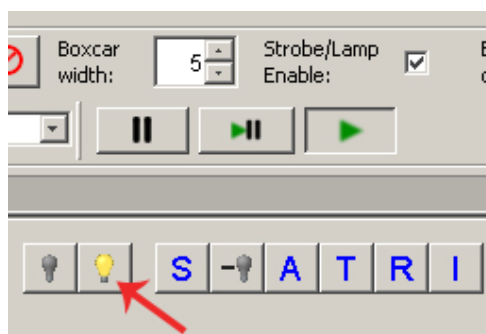
- b. **Step Two: Zero the instrument**

Uncheck Strobe/Lamp enable. You will see the light source go off. With a cuvette containing a blank sample (distilled water) in place, click on the dark light bulb icon on the menu bar to store the dark spectrum. This defines the "no light" state of the instrument that is taken as zero.



- c. **Step Three: Set 100% transmittance**



With the blank sample in place, click the lamp check box to turn on the instrument lamp. Wait 1-2 minutes for the output to stabilize. Click on the bright yellow light bulb icon to store the 100% spectrum. This state defines the 100% level at each wavelength of light.

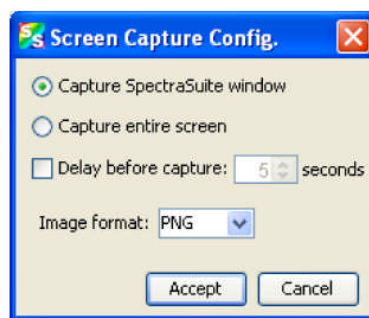




3. The spectrophotometer is now calibrated. You can switch between scope (S) (raw data), transmittance (T) and absorbance (A) modes by choosing the S, T, or A icon. The scope mode is used for calibration. Use the absorbance (A) mode for your measurements.



4. To measure the absorbance of your sample place the cuvette in the spectrophotometer. Once the output has stabilized, the following features may be useful:

- a.  **Set scale** You may use this button to adjust the scale of the x or y axis displayed on the graph.
- b.  **Autoscale** This button automatically adjusts the y-axis displayed on the graph.
- c. Select **File > Screen Capture** to display the screen capture configuration dialog box.



- d.  **Spectral Overlay** One useful feature if you are comparing samples is the overlay feature. This feature may be used to display several data sets simultaneously. To use it go to the **Overlay** menu and select a previously saved file. To distinguish each dataset when printed, you may need to use the "Display Properties" item under the View menu. This will bring up a dialog box with a tab for "overlay line" to be used to adjust the line properties of the displayed data. For each data set you can adjust the line width, dot-dash pattern and the line color.
-  Use delete overlay spectra to remove any spectra that have been overlaid on the current graph.