



## UV-VIS Spectrophotometer Quick Start Guide

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May, 2018

1. Open the sample compartment lid.
2. If not in place attach the standard sample compartment unit for direct measurements
3. If using integrating sphere attachment remove the standard sample (direct) unit and install the integ. sphere attachment. Make sure to install BaSO<sub>4</sub> plates and appropriate sample holders in their positions. For details refer to the Instruction Manual for Integrating Sphere Attachment.
4. Turn on the Spectrophotometer using the power On/Off switch
5. Turn on the computer and click on the UV Probe software (available on the desktop).
6. Select the "Spectrum Mode" using the button on the toolbar (most likely the software is already in the "Spectrum Mode")
7. Click on the "Spectrum Method" button (yellow button with "M") on the toolbar or go to Edit > Method. A tabbed dialogue button will now open to allow you to set the parameters for the measurements.
8. In the "Measurement" tab:
  - Enter the wavelength range via the "Start" and "End" fields. Always enter the longer wavelength into the "Start" field and the shorter wavelength into the "End" field.
  - Select the scan speed to be Medium via the drop down menu. Medium is fine for the broad absorption bands typical of organic materials; if you have samples with sharp absorption features, it may be better to run a slower scan.
  - Select the Auto Sampling Interval or choose the interval from drop down menu
  - The "Scan Mode" should be set to "Single".
9. In the "Instrument Parameters" tab:-
  - Select Absorbance/Transmittance/Reflectance from the "Measuring Mode" drop down menu. Note that Integrating Sphere Attachment is suitable for all

the measuring modes. Standard sample compartment (direct) is suitable for only Absorbance and Transmittance modes.

- Select “Direct” detector unit for standard sample compartment, if using integ. sphere select “External 3D” detector unit.
  - Select a value of 2 nm from the “Slit Width” drop down menu for Direct unit, select 5 nm or higher for “External 3D” detector unit.
  - Ensure that the “S/R exchange” is set to “Normal”. Only for measurement of Diffuse Reflection Including Specular Reflection select “Inverse” for S/R exchange
10. Click the “Connect” button to initiate communication between the computer and the Spectrophotometer. The instrument will now begin its initialization procedures.
  11. Perform baseline correction with **no sample** in place by clicking on the “Baseline” button at the bottom of the screen.
  12. Ensure that the baseline range matches that which you have previously entered in the “Spectrum Method” dialogue. Click “OK” to run the baseline calibration.
  13. Now insert your sample and reference into the sample mounts in the sample compartment and close the sample compartment lid.
  14. To obtain a spectrum, click on “Start” and the machine will begin collecting data.
  15. To save a data set, select “Save As” from the “File” menu and enter a filename. Select “Data Print Table (\*.txt)” from the “Save As Type” drop down menu. This will save the data in an ASCII text format which you can access using other software. Please only save data in your folder.
  16. To shut the instrument down press the “Disconnect” button at the bottom of the screen and turn the instrument off using the Power On/Off button. Close the software and shut the computer down when you are finished with it.
  17. Ensure that the lid to the sample compartment is fully closed when you are finished as external light leaking into the can cause damage to the PMT.

**It is quite acceptable to leave the machine running the day should it be used regularly, however it be inactive for long periods of time (>3hours), it should be shut down to preserve the lamps. The machine should be shut down at weekends and overnight, If you see the instrument left on late at night or at the weekend please shut it down.**