

How to use the spectrophotometer with a sipper attachment.

These are state of the art spectrophotometers and each costs over \$12,000. Please make certain you take care of this instrument. Make certain the bulb is off when you are done and any spills are cleaned up. Tell Dr. Provost of any problems with the machine so they stay in use for all students.

General Points:

- Screen options that are in brackets i.e. [VIS ON] is a toggle switch. You can change this option by simply clicking on it.
- Other screen options are text highlighted in white.
- When a menu box asks about saving or other options, click on the box or the text to toggle between accepting or declining the option (such as saving data). When the box is filled then the option has been selected. When the box is empty the option has not been selected.
- DO NOT SAVE YOUR DATA without prior permission. Use your lab book.

Steps for use:

- 1) The screen for the spec should have three small boxes on the top and one larger box center bottom of the screen. If not, find and click "quit" until this screen is showing.
- 2) Turn on the bulb. In the bottom left corner are the options [VIS OFF] or [UVOFF] .
 - For 340 nm and below use the UV bulb with a quartz cuvette
 - For 340 nm and above use the VIS bulb with a plastic, glass or quartz cuvette.
- 3) In the upper left box (labeled "routine measure") find the "Fixed Wavelength" option.
- 4) Click on the "method" option found at the top of the screen. *If it is not available the old data must be deleted. Then select the method you wish to use. It doesn't hurt to review that the sipper is selected and the proper wavelength has been set. Some people like to change it without telling others.*
- 5) Once you have selected your method option, click on the "exit" option and your method is loaded into the instrument.
- 6) Open the spec and make certain the sipper is in the cuvet furthest from you. *It should be in front of the light path and that the sipper viewing port is in the light path.*
- 7) Place the sipper hose over the pump and check the waste bottle to ensure it is not full. If so, dump it.
- 8) Using water, flush the hose until the hose looks clear. Inspect the pump and hosing for leaks or stoppage.
- 9) Place the tube in your blank solution (at least 1.5 ml will be needed) and press fill blank.
- 10) Now place the tube in your sample and press fill read. *You should not need to rinse between samples. It is good practice to go from a low to high absorbance sample. If you are concerned about cross contamination, feel free to rinse with water between samples.*
- 11) When the last sample has finished print if the option is available or copy you data into your lab book
- 12) Flush the hose with water followed by a methanol rinse and another water rinse.
- 13) Disconnect the hose from the pump.
- 14) Turn off any bulbs.