Shimadzu UV-1700 UV/Vis Spectrometer Updated November 14, 2017

Instrument instructions can be found at:

c. Open UV Probe 2.10.

i. (Start > All Programs > Shimadzu > UVProbe).

d. Give control of instrument to computer.

- i. On the instrument
 - 1. After the UV has finished its checks, the Mode screen will be displayed. Press the F4 key (PC Ctrl) on the instrument keypad to give control to the computer.
- i. On the computer
 - 1. Click on the "Spectrum" icon (far right in menu bar) to open the spectrum window, then click on "Connect" to switch control to PC.
- e. Enter sample information into UV log sheet.

3. Create/Edit Method

- a. **Load method** (Edit > Method).
- b. Edit parameters.
 - i. Measurement Tab.
 - 1. Set the wavelength range starting and ending values.
 - 2. Set scan speed.
 - 3. Set sampling interval.
 - 4. Under Scan Mode click Single.
 - ii. Instrument Parameters Tab.
 - 1. Select absorbance as measurement mode.
 - 2. Click OK.
 - iii. Change Y-axis range.
 - 1. Go to the overlay graph (select tab at top of graph or Graph > Overlay) and click on the minimum and maximum absorbance values.
 - 2. Enter a new value.
 - 3. When finished, click anywhere on the screen to get out of this mode.

c. **Save method** (File > Save As).

- i. Enter file name.
- ii. In the Save As Type list, click Method File (*.smd).
- iii. Click Save.

4. Collect Spectrum

a. Perform baseline correction.

- i. Make sure sample and reference compartments are clear.
- ii. Be sure to "Autozero" before collecting the baseline to get the ABS at 0.000 (Instrument>Commands>Autozero).
- iii. Collect baseline (Instrument > Commands > Baseline).
- iv. When the Baseline Parameter box appears, enter the starting and ending values.
- v. Click OK.
- b. **Insert sample** (front cell holder) **and reference** (back cell holder). Clear sides of the cuvette face left and right.
- c. **Start scan** (Instrument > Commands > Start).

1. Protocol

- a. **Read instructions carefully before using instrument**. Reading the bold sentences in each category will tell you what you need to know to run the instrument.
 - i. Bullets are under the bold sentences when more detail is required.
 - ii. At the end of the instructions is a frequently asked questions/troubleshooting section.

2. Startup Procedure

a. Turn on instrument.

- i. Wait for instrument to go through its initial checks.
- ii. Allow instrument to warm up for fifteen minutes.
- b. Enter sample information into UV log sheet.

3. Edit Method

a. Edit parameters.

- i. Select Spectrum from Mode Screen (2 on keypad).
- ii. Change parameters press numeric key on keypad that corresponds to the parameter you want to change, change the vhp174.62 465.9 Tm0 g0 G[C)-2(ha)4(ng)10(e)4

Shimadzu UV-1700 Frequently Asked Questions

1. How do I set up the screen to display only what I need?

View > Graph will already be selected (this option cannot be deselected).

- a. View > Photometer Status.
- b. Graph > Overlay.
- c. Window > Spectrum.

2. What are print layouts and how do I use them?

Print layouts are templates used when printing reports.

- a. **Open Report Generator** (Window > Report Generator).
- b. Open a graph and edit it to display the information you want.
- c. Save graph as a new name.
- d. Return to spectrum screen (Window > Spectrum).
- e. Open Quick Print (View > Setting) and select Quick Print tab.
- f. Select the Overlay Spectrum Graph.
 - i. Click the Brower button and find the graph you created.
- g. Click Print Preview to make sure everything is correct (File > Print Preview).
- h. **Print graph** (File > Print).
- i. Return Overlay Spectrum Graph to its default.
 - i. Quick Print tab (View > Setting), hit the Reset button.

3. How do I display/delete graphs?

- a. **Display legend** (Graph > Legend).
 - i. Open spectra you would like to view.
 - ii. Overlay view will show all the spectra open.
 - iii. The Active view will only show the spectrum that was most recently opened.
- b. To delete graphs from the legend box, open (File > Properties).
 - i. Expand the folders until you see the RawData files.
 - ii. Select and hit the Delete button to remove. This will remove the spectrum from memory, not from the disk.