

UNIVERSITY *of* CALIFORNIA • IRVINE



Laser Spectroscopy Facility

# Shimadzu UV-1700 Absorption Spectrometer

Operation instructions

## Turning on procedure

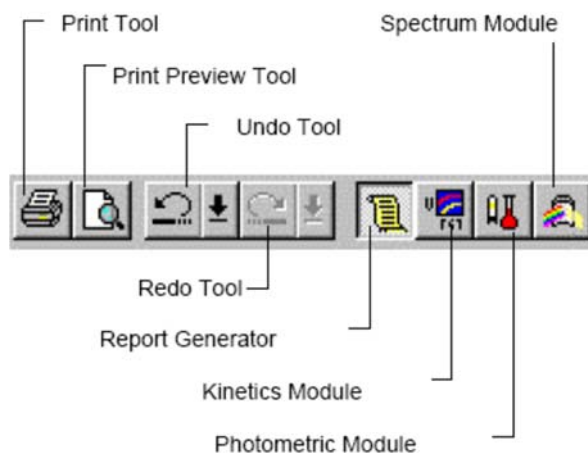
1. Turn on **Power switch** located on the left side. (make sure that sample chamber is empty and lid is closed, it takes ~3min to initialize).
2. After initialization, a "Mode" screen is displayed. Press **F4** key on instrument keyboard (for PC Control).
3. Double click the **UVProbe 2.21** software.
4. Click the "**Connect**" icon at the bottom of the screen.




5. Instrument is now connected.

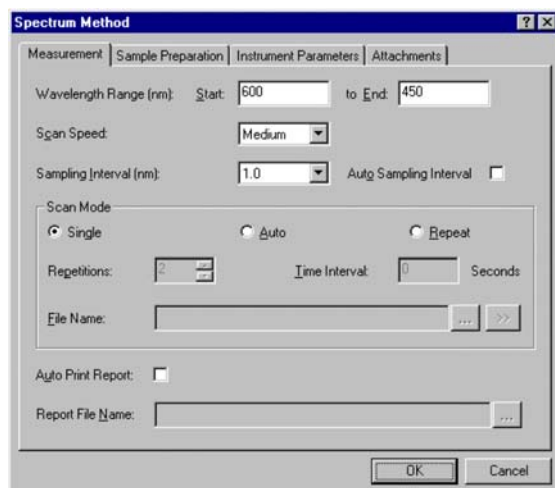


6. There are three modes in menu Bar: Spectrum, Photometric, and Kinetic modes.
- 7.



8. Select the Spectrum tab then click on the yellow **Method** icon 

9. Edit Method Parameters:



Measurement tab:

- Set the wavelength range
- Set scan speed
- Set sampling interval. 0.2nm
- Scan Mode click Single
- Save Method (File > Save As).

Instrument Parameters Tab:

- Select absorbance, ok

**10.** To scan a Baseline, fill out two matching cuvettes with a “Blank” solvent, place them in the Reference (rear) and the Sample (front) cell holder’s compartment; notice the direction of the marking on the Sample cuvette. Click **Baseline**.


**11.** Remove sample cuvette, replace content with your sample and insert back. Click **Start**.

**12.** When scan is done a dialog box to save data is automatically displayed. Save your file as type Spectrum Files (\*.spc).

**13.** To find peaks, select peak pick icon from spectrum menu .

**14.** To save data as (.txt), from menu bar select **Operation**, select **Data Print**, a data spreadsheet appears, move the cursor inside the spreadsheet then right click and select **Properties**. Under Edit, type in the interval (0.2 nm, this is your method sampling interval), under Auto fit select **All Data**. Click on **File....> Save As....>** and select **Data Print Table (\*.txt)**, enter your filename.

### Turning off procedure

1. Click on the Disconnect icon . Close the software.
2. Turn off spectrophotometer.
3. Remove all cuvettes from the sample holder chamber.