## Barebones Guide to Shimadzu UV-VIS Spectrum Acquisition

- 1. Turn on the instrument by flipping the switch on the left-hand side. Wait about 5 minutes for the lamps to warm up.
- 2. Open the UV Probe software by double-clicking the icon on the desktop UVProt
- 3. Click on the Connect button Connect. The instrument will initialize and do a series of performance checks, which takes about 5-10 minutes to complete. All the boxes should be green when this is done. Click "OK" when it is complete.
- 4. Click on the Spectrum mode icon are or click on Windows -> Spectrum.
- To set up your acquisition parameters, click on the Method icon <sup>™</sup> or click on Edit -> Method.
- 6. Click on the Attachments tab. Be sure the correct cell-holder is selected. Use "None" if you are using the standard 2-cell holder. If you are using either the 16-microcell or 12-cell holder, select the number of cells you will be acquiring data from, then click "Initialize". *NOTE: If you are using the 16-microcell holder, you MUST select "16-Microcell" even if you are not using all 16 cells!*

Spectrum Method				? ×
Measurement Sample Preparation	Instrument Parameters	Attachments		,
Attachments :				
None 6-Cell	Number Of Cells:		3	*
CPS Sipper / TSU				
8-Microcell 16-Microcell				nitialize
12-Cell Syringe Sipper				
		OK		Cancel

7. Click on the Measurement tab. Enter the wavelength range you want to observe, between 900-190 nm. Change the Sampling Interval if you wish to acquire at a very high resolution (1.0 nm is typical of most spectra).

pectrum Method				? ×
Measurement Sampl	le Preparation   Inst	rument Parameters	Attachments	
Wavelength Range (	(nm): Start:	800	to End: 190	
Scan Speed:	Γ	Fast 💌		
Sampling Interval (nr	n):	1.0 💌	Auto Sampling Interve	al 🗖
Scan Mode				
<ul> <li>Single</li> </ul>	0	C Auto	C Repea	at
Repetitions:	2 *	Time Inte	erval: 2	Seconds
Filename:	C:\Program Files	\Shimadzu\UVProl	pe\Data\mkm-i-49 PLP	>>
Auto Print Report:				
Report File Name:				
			ОК	Cancel

Click on the Instrument Parameters tab. Change the slit width if needed (0.5 nm is typical). If you are expecting an absorbance at the wavelength where the light source switches from visible to UV, change the switch wavelength as needed (between 282-399 nm). Typically 340 or 360 nm is used.

Spectrum Method					? ×
Measurement Sample	e Preparation	Instrument Pa	arameters Attachm	ients	
Measuring Mode:	Absorbance	-	Slit Width(nm):	0.5	•
Energy-	OFF	Y	PM Gain:	0 (Min)	Ţ
Light Source Chan	ge Wavelengt	n (393-282 nm)	300		
S/R Exchange:	Normal	•			
				ОК	Cancel

- 9. *Optional*: Click on the Sample Preparation tab. You may enter additional information such as sample weight and dilution volume here.
- 10. Click on the OK button when done setting up the method.
- 11. Place two cuvettes of solvent in the cell holder and click OCAuto Zero.
- 12. Click Baseline to zero over the entire wavelength range. This may take a few minutes.
- 13. Remove the cuvette filled with solvent from the frontmost cell holder. The front cell holder is the sample holder.
- 14. Place your cuvette(s) filled with sample in the front cell holder(s).
- 15. Click on **Start** to start acquisition.
- 16. When the acquisition is complete you will be asked for a filename.
- 17. To autoscale your spectrum, click with the RMB on the spectrum plane and select autoscale.
- 18. To perform peak-picking click on  $\blacksquare$  or go to Operations -> Peak Pick.
- 19. The software automatically selects both peaks and valleys. If you wish to see only peaks, click with the RMB on the peak/valley table and deselect "Show Valleys" and "Mark Valleys".

- 20. To print your spectrum and peak list as a report, click on Window -> Report Generator.
- 21. Click on File -> Open and select the file "Spc Peak Pick".

Open		? ×
Look in: 🔁 Reports	▼ 🖶 🖆 🖬 ▼	
MKM-I-44 serine MKM-I-44 Photometric Method Sample Graph Sample Table Spc Active Graph Spc Data Print Spc Method	Spc Overlay Graph       Tm         Spc Peak Area       Tm         Spc Peak Pick       Tm         Spc Point Pick       ws-         Spc Stacked Graph       Standard Curve         Standard Error Prediction Table       Standard Table	c Active c Overla c Stacke VI-33-Kr
File name:	Ор	en
Files of type: Report Files (*.rpt)	Can	cel

- 22. Click on File -> Print to print the report.
- 23. Click on the icon to return to spectrum mode.
- 24. To save your data click on File -> Save.
- 25. To clear your spectrum and acquire new data, click on File -> Properties. Select your file and then click on the Delete button. *NOTE: Be sure your file is saved before you click Delete or all data will be lost!!*

E File Properties	? ×
Loaded Data:	
🖽 📾 C:\Program Files\Shimadzu\UVProbe\Data\ANTHRACEN	_10115
No information is available	
	_
Method & History & Summary	
Store All Data in Single File: Disabled	
Delete Rename Show/Hide C	lose

- 26. When you are done acquiring all your spectra, remove your cuvettes.
- 27. Click the Disconnect button.
- 28. Exit the UV Probe software.

29. Turn off the UV instrument.