
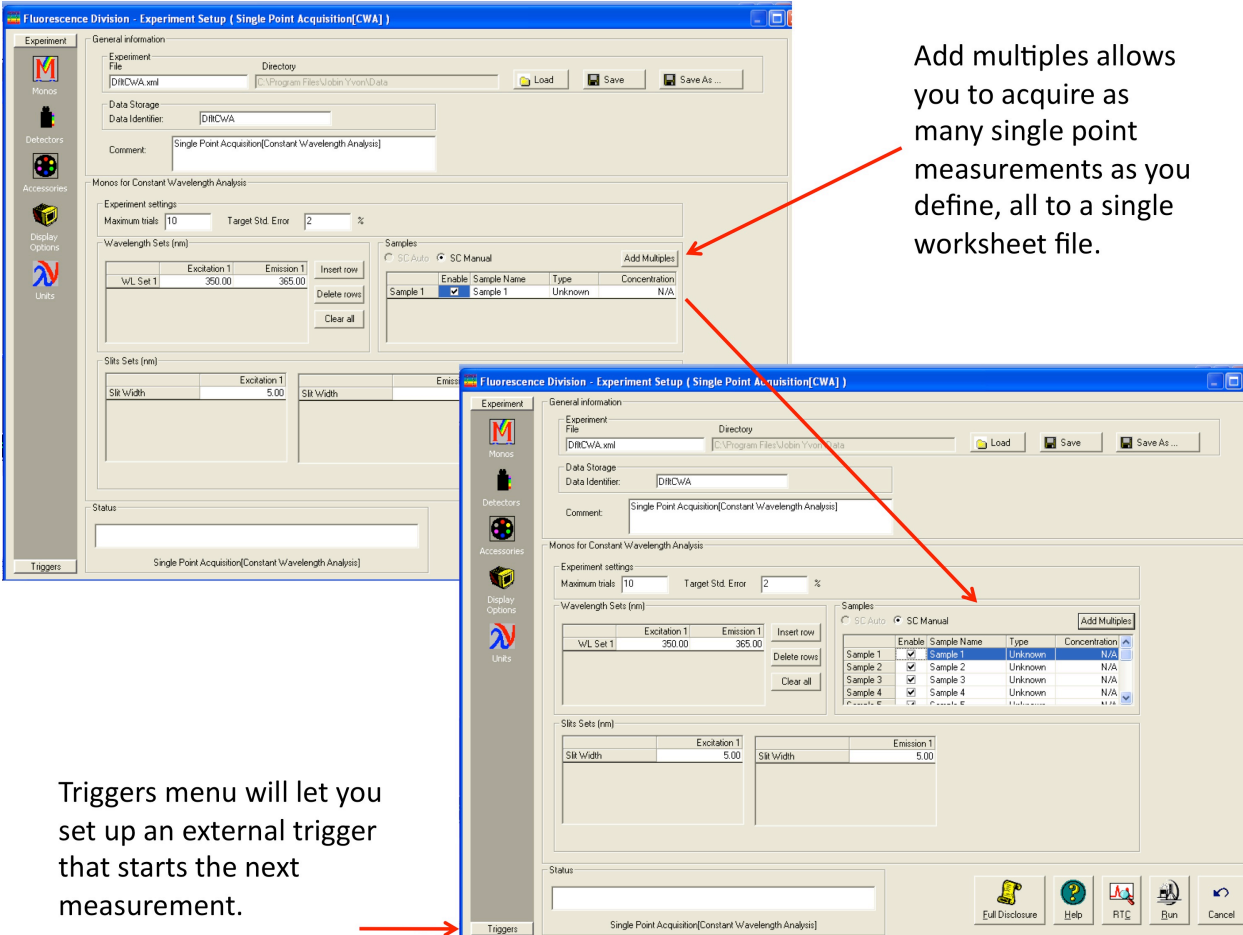


Setting up a Single Point Experiment in FluorEssence

Horiba Jobin Yvon has a software patch which allows you to set up multiple single point data sets and save them in the same worksheet. Unfortunately, there doesn't seem to be a way to save or export the Origin file as an excel spreadsheet. The easiest thing to do is copy your columns of data into Excel yourself. (Microsoft Office has been installed on the Fluoromax computer.)

1. Click on the M (main) icon. 
2. For constant wavelength analysis (CWA) intensity measurements, click on Single Point menu option.
3. On the center right half of the page you will see a line with Sample 1. Make sure Enable is checked.
4. Click on Add Multiples button (see figure below).
5. Input the # of data sets you want on the spreadsheet.
6. Click on Triggers icon (on the bottom left of the page—see figure below).



Add multiples allows you to acquire as many single point measurements as you define, all to a single worksheet file.

Triggers menu will let you set up an external trigger that starts the next measurement.

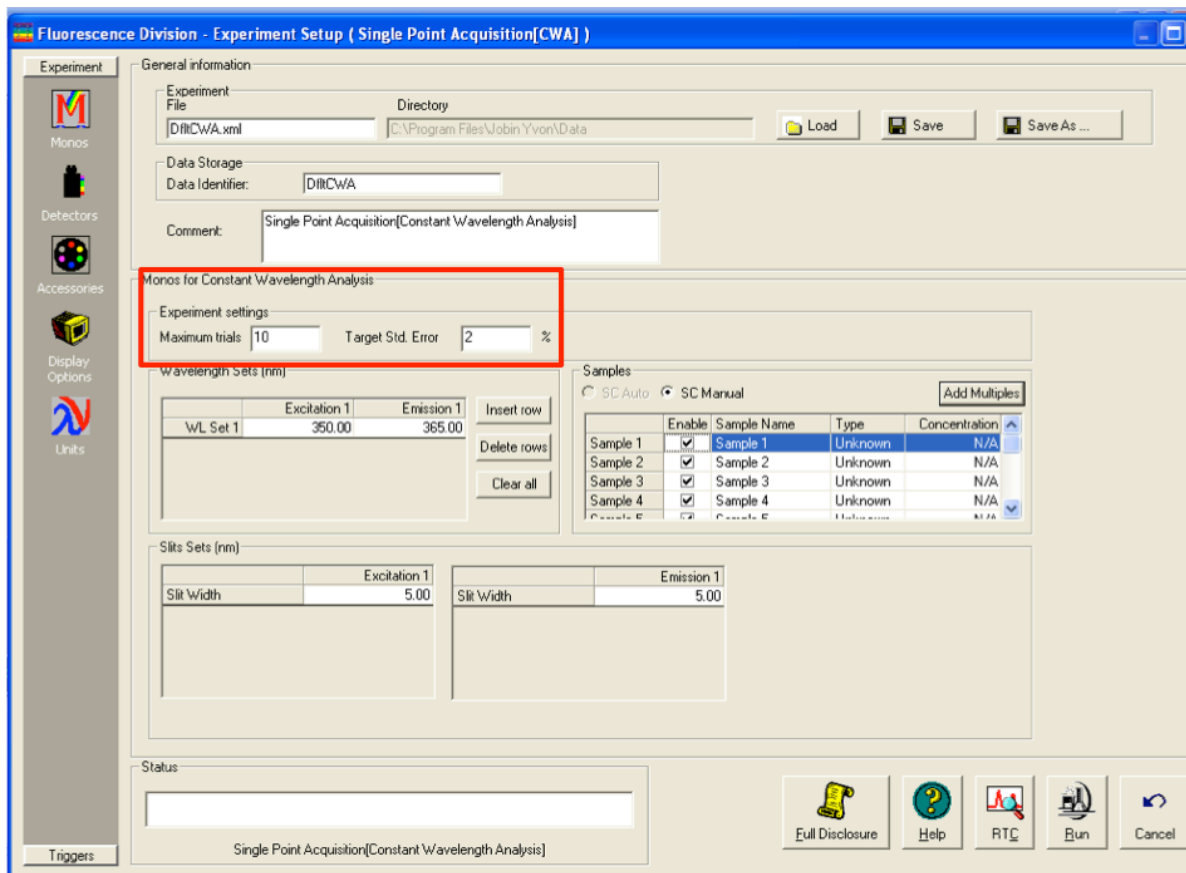
Wavelength Sets (nm)	Excitation 1	Emission 1	Insert row	Enable	Sample Name	Type	Concentration
W/L Set 1	350.00	365.00	Delete rows	<input checked="" type="checkbox"/>	Sample 1	Unknown	N/A

Wavelength Sets (nm)	Excitation 1	Emission 1	Insert row	Enable	Sample Name	Type	Concentration
W/L Set 1	350.00	365.00	Delete rows	<input checked="" type="checkbox"/>	Sample 1	Unknown	N/A
W/L Set 2				<input checked="" type="checkbox"/>	Sample 2	Unknown	N/A
W/L Set 3				<input checked="" type="checkbox"/>	Sample 3	Unknown	N/A
W/L Set 4				<input checked="" type="checkbox"/>	Sample 4	Unknown	N/A
W/L Set 5				<input checked="" type="checkbox"/>	Sample 5	Unknown	N/A

7. Select Software Triggers
8. On the middle left of the page select Experiment Start and Add it.
9. Click Run button when you want to take data. It will prompt you to insert a sample.
10. Now every time you click to acquire, a new data set line will come up on the single spreadsheet.

Notes from application specialist Jim Mattheis at Jobin Yvon:

We have designed the single point routines with a user defined control of the standard deviation. This function is controlled by setting the maximum trials and the standard deviation parameters as they work together. You will first decide on the precision required for your results and type this as the standard deviation in the field called "Target Std. Deviation." Next decide or estimate the number of averages that would produce the desired standard deviation, perhaps increasing the number of averages to ensure that you will almost always hit the target. Type this into the "Maximum Trials" field (see figure below).



Now, when you start the experiment you will be prompted to add the first sample (start the titration in your case). The software will now automatically read the signal intensity as defined in the detector list then repeat the reading and averaging with the first. It will then check (after three readings) to see if your average is equal to or less than the Target Std. Dev." If it is equal or better than the entered Std. Dev. then the averaging will stop and you will be prompted to go to the next sample or titration. The averaging will continue until the average hits the target std. dev. or reaches the maximum trials value that you entered above. The max trials is there to prevent the averaging from going on for ever if the target std. dev. is never actually achieved (in a reasonable time period).

Note: When setting the Target Std. Dev. and Max trials keep in mind that signal to noise and thus standard deviation is also controlled by integration time as well as all the usual setup parameters such as bandpass and wavelength selection.