

User guide for SpectraMax M5 Microplate Reader

Before beginning, you should contact Tatiana Laremore (tnl1@psu.edu) to be added as a trained user in iLab. Bookings are free, but you will need to use iLab to book. If you do not have an iLab account you must first make one: <https://psu.corefacilities.org>

For information about the plater reader and user manual:

<https://sites.psu.edu/msproteomics/equipment-and-rates/plate-reader/>

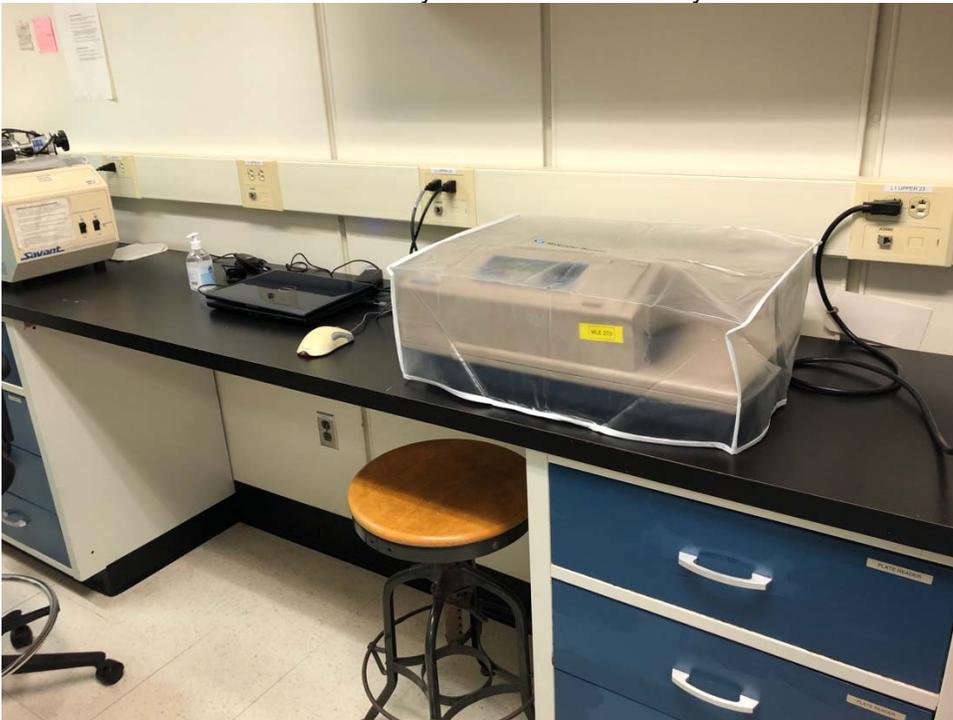
It is also likely that a quick online search will turn up protocols and advice for your particular application.

Covid-related considerations:

- Access is currently not available on Mondays. Room is unlocked during your reserved time (9-5 Tue-Fri).
- After booking in iLab also send Tatiana a courtesy email to make sure door will be unlocked and lab occupancy can be anticipated.
- Sanitize hands before and after using the equipment (sanitizer available)
- A mask covering both nose and mouth should be worn at all times inside the building
- Maintain 6ft social distancing at all times
- If you do not have card access to Althouse building, contact Bob Boor (x35244; rdb2@psu.edu) to request access

Below are basic directions to get you started and to ensure the care of the instrument and space:

1. Enter Althouse room 003 during your booking time and take the first left turn to find the plater reader. It should look like this when you arrive AND when you leave:



2. Remove the dust cover and find the ON switch on the back, right side.



3. Allow time for platereader to start up, then the drawer will open and it will look like this:



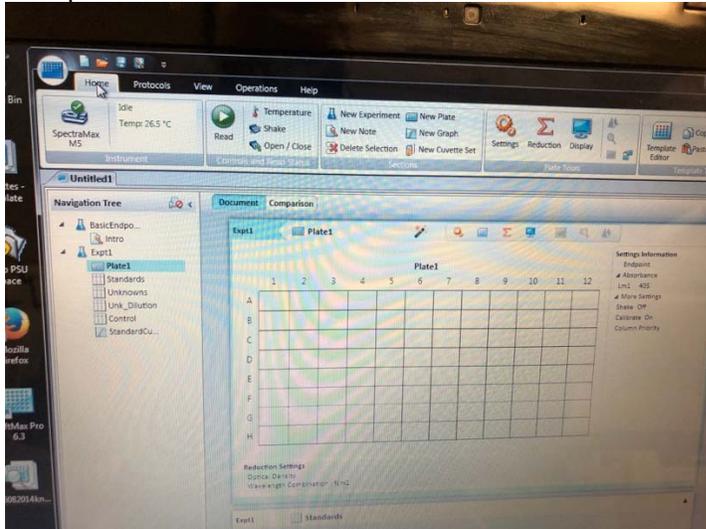
4. If you are not using fluorescence, remove the purple holder. Whenever you are ready, you can insert your plate and push the "drawer" button (this does not need to be done before opening/exploring the software, but must be done before reading the plate, of course). The purple holder is used for reading non-transparent plates from the top (e.g. fluorescence).



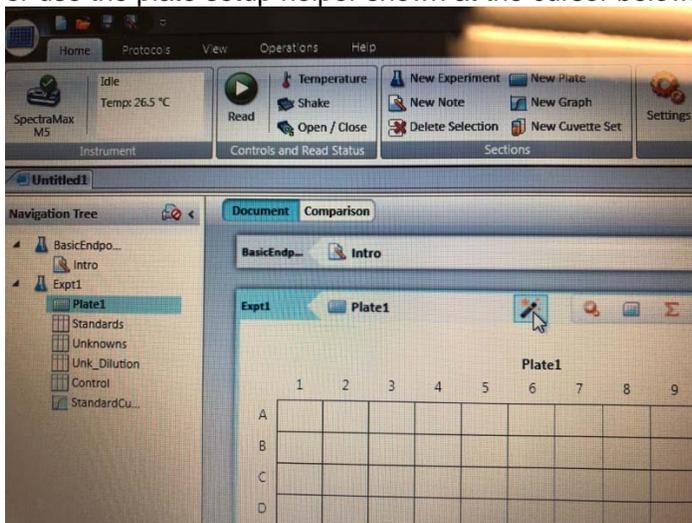
5. Open and turn on the laptop. Select the lab user profile. The password is "password".



- On the desktop, find and open the SoftMaxPro6.3 software. The instrument should connect automatically if it is already turned on and the screen should look like this with "SpectraMax M5" showing as connected in the top left:

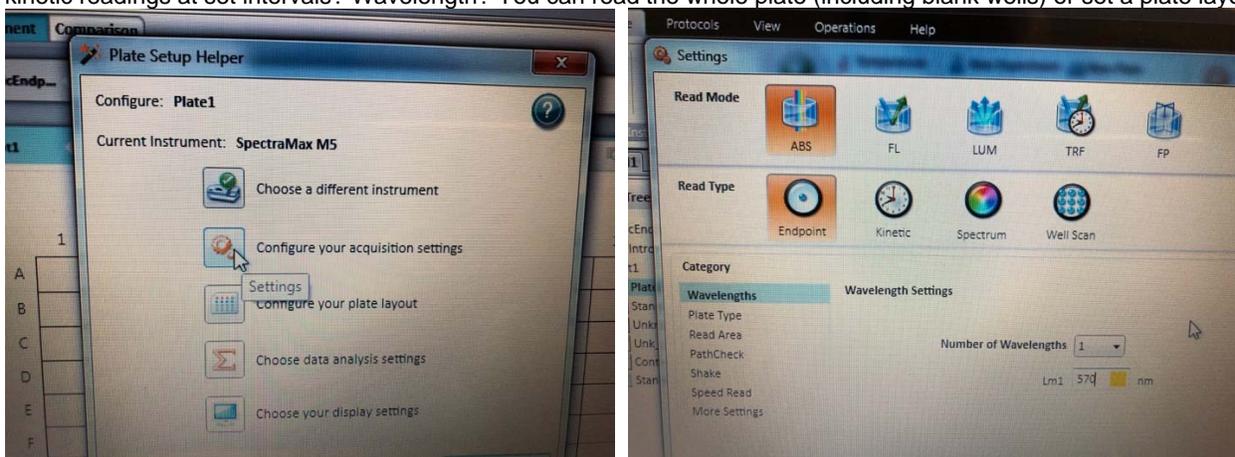


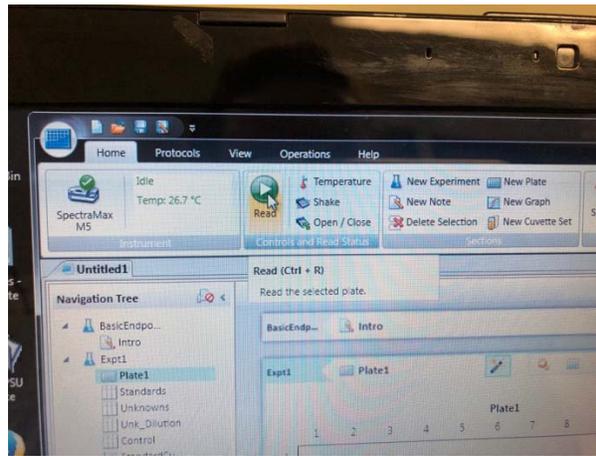
- To set up how to read the plate you can load an existing protocol from the protocol manager/protocol library or use the plate setup helper shown at the cursor below:



- In the plate setup helper you will see available options for acquisition, adding a plate layout, or adding data analysis steps. You will minimally want to go to the acquisition tab and make appropriate selections for your experiment.

Absorbance/fluorescence/luminescence? Plate type? (most often leave at "96 well standard"). Endpoint (single reading) or kinetic readings at set intervals? Wavelength? You can read the whole plate (including blank wells) or set a plate layout.



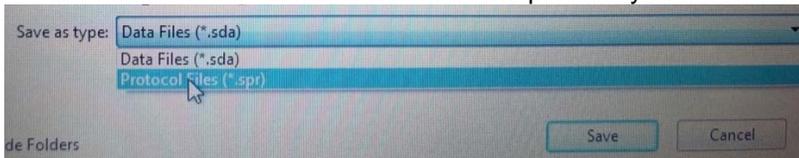


9. Click "Read" to start your protocol.
10. The readings will come up on the home tab (and you may have also selected additional processing/display options).

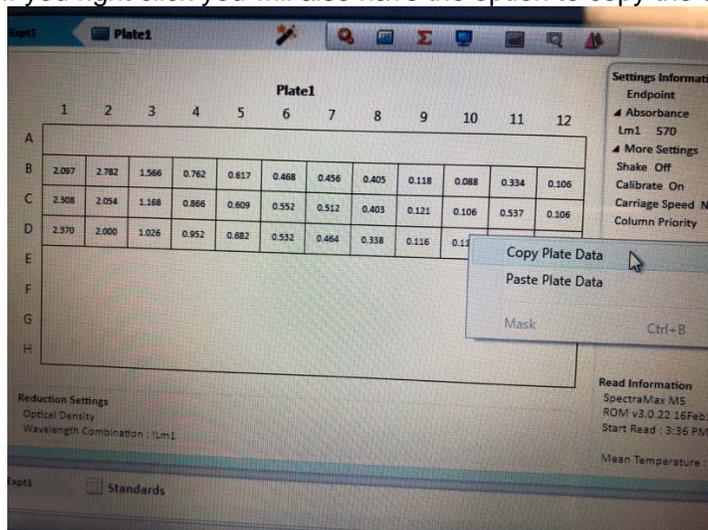
The screenshot shows the SpectraMax MS software interface displaying a data table for 'Plate1'. The table has 12 columns (numbered 1-12) and 8 rows (labeled A-H). The data is as follows:

	1	2	3	4	5	6	7	8	9	10	11	12
A												
B	2.097	2.782	1.566	0.762	0.617	0.468	0.456	0.405	0.118	0.088	0.334	0.106
C	2.308	2.054	1.168	0.866	0.609	0.552	0.512	0.403	0.121	0.106	0.537	0.106
D	2.370	2.000	1.026	0.952	0.682	0.532	0.464	0.338	0.116	0.110	0.430	0.106
E												
F												
G												
H												

11. You can save the data by clicking the Save or Save as icons at the top left corner of the window and saving the data file as .sda. You can also save the protocol you made as .spr.



If you right click you will also have the option to copy the data and can then paste it directly into an excel sheet



12. Transfer the data to a memory stick, close out the software, and shutdown the laptop.
13. Remove plate from machine and place purple holder back in the tray (if you removed it) and close the drawer. Switch off the platereader. Replace the dust cover. Clean up and take away any materials you brought in.