Sigma Plot – Installed on "Middle Lab Computer", 30-day trial available online

NOTE: There is no internet or printer available for the lab computers.

Cut and paste your Vo and S data from Excel – you will likely need to relabel your data (put titles in grey heading boxes at top of column)

A. To fit data into Michaelis-Menten Equation

1. Click on STATISTICS (menu bar top of page)
2. Select REGRESSION WIZARD
3. Select LIGAND BINDING from the Equation Category box
4. Select one-site saturation, click NEXT
    a. For x variables, highlight the x-data column on the spreadsheet
    b. For y variables, highlight the y-data column on the spreadsheet
5. Click NEXT
6. Record the Vmax (bmax) and Km (Kd) data
7. Click NEXT
8. Highlight a blank column, this will position the predicted data there. If you do not highlight a blank column it will insert overtop of your data.
9. Click NEXT
10. Click FINISH
11. Remove any negative values in the predicted X and Y columns.

B. Modifications to Graphs

Ideally you want to plot your actual data points as well as the fitted line.

To add actual data:

1. Right click on the graph and click ADD NEW PLOT
2. Select SCATTER PLOT, Click NEXT → SIMPLE SCATTER, click NEXT
3. Highlight your actual X and Y data columns
4. Click FINISH

To convert your Michaelis-Menten fitted curve from points to line:

1. Right click on any point of the curve
2. Select GRAPH PROPERTIES
3. Select SYMBOLS and scroll through the options and select NONE
4. Also under graph properties, is the option to change the line thickness (LINE)
5. Click OK

To label and scale your axes: Right click on the axis, click EDIT.
To add a text box, make a copy of one of the axes titles and edit.

It may now be a good idea to copy the graph to word and/or save the Sigmaplot file for future use.

C. Making Graphs in Sigmaplot

1. Select GRAPH from the top menu
2. Select CREATE GRAPH
3. Select the type of graph you require
    a. You can add multiple plots to your graphs by using the MULTIPLE and X MANY Y options, or you can create your graph and the ADD PLOT
4. Select X and Y columns
5. Proceed with modifications as listed above in section **B**

D. Adjusting your data

Sigmaplot varies significantly from Excel in this aspect

Select TRANSFORM from the top menu

Enter your action, example:

If you want to take the inverse of S to make 1/S (perhaps in column 3):
type: col(3)=1/col(2)

If you want to divide S by $1x10^{-5}$:
type: col(4)=col(2)/1e-5

If you want to multiply S by 35, divide by 12, and then add 14:
type: col(5)=((col(2)*35)/12)+14

Excel is more familiar with most students, however Sigmaplot can be easier and more powerful with practice.

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