

## Displaying Standard Curves in Excel 2008 and 2011 on Macs

1. Open Excel at bottom of screen.



2. Once the program as opened, enter your data.

A screenshot of the Microsoft Excel 2008 interface on a Mac. The spreadsheet is titled 'Workbook2'. The data is entered in columns A and B, starting from row 2. The first column is labeled 'Concentration (x)' and the second column is labeled 'Optical Density (y)'. The data values are: 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, and 1.0 for concentration; and 0.23, 0.19, 0.25, 0.46, 0.52, 0.64, 0.71, 0.68, 0.77, and 0.8 for optical density. The cell D4 is currently selected.

Concentration (x)	Optical Density (y)
0.1	0.23
0.2	0.19
0.3	0.25
0.4	0.46
0.5	0.52
0.6	0.64
0.7	0.71
0.8	0.68
0.9	0.77
1	0.8

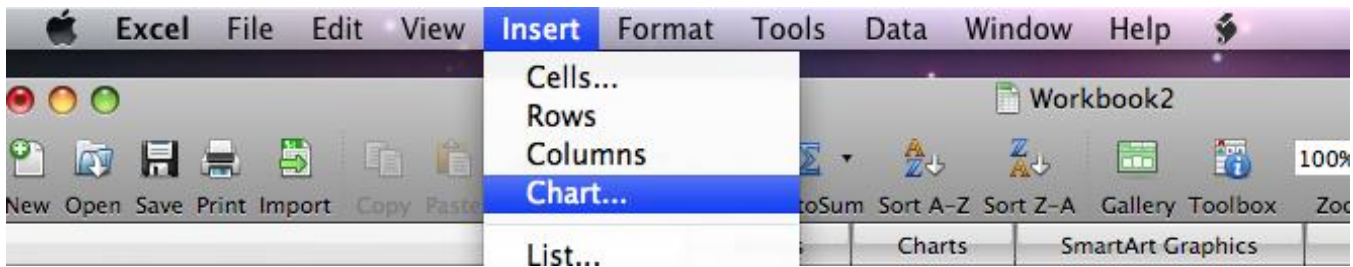


3. Highlight/Select your data including titles.

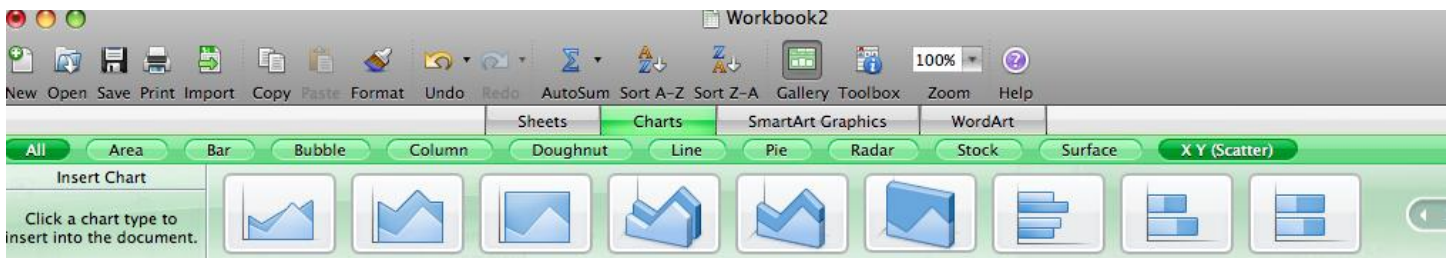
A screenshot of the Microsoft Excel 2008 interface on a Mac, showing the same data as the previous step. The data range, including the headers and all data rows, is highlighted in blue. The cell D4 is still selected.

Concentration	Optical Density
0.1	0.23
0.2	0.19
0.3	0.25
0.4	0.46
0.5	0.52
0.6	0.64
0.7	0.71
0.8	0.68
0.9	0.77
1	0.8

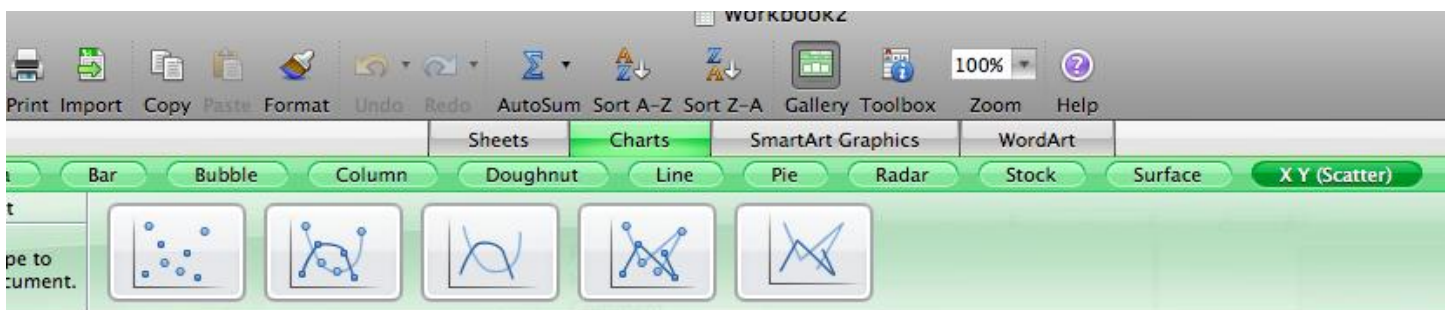
4. Select “Insert” at very top of screen. Select “Chart...” in this menu.



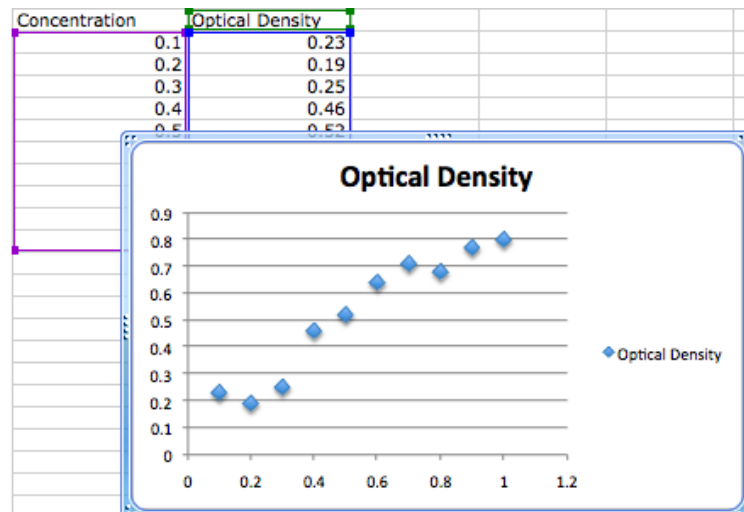
5. This will open a green menu above your excel sheet. Select “XY (Scatter)”



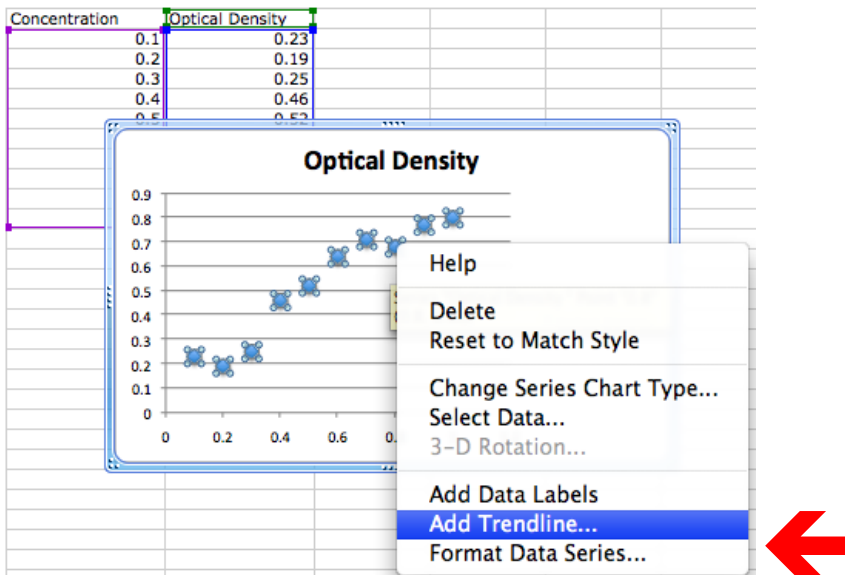
6. Select the leftmost graphic option showing unconnected data points in a white box.



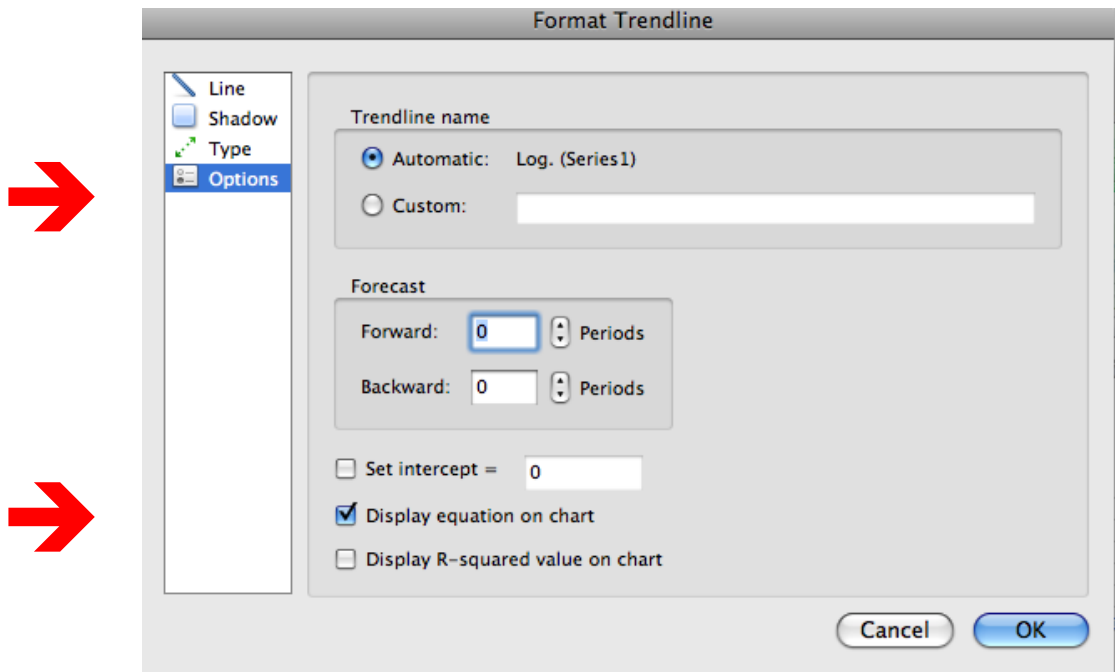
7. A chart will pop up with your data displayed if you had the data highlighted before hitting Insert/Charts.../XY(Scatter).



8. HOLD DOWN THE CONTROL KEY AT THE BOTTOM LEFT OF YOUR KEYBOARD. Then click any data point. A drop-down menu will appear. Select "Add Trendline".

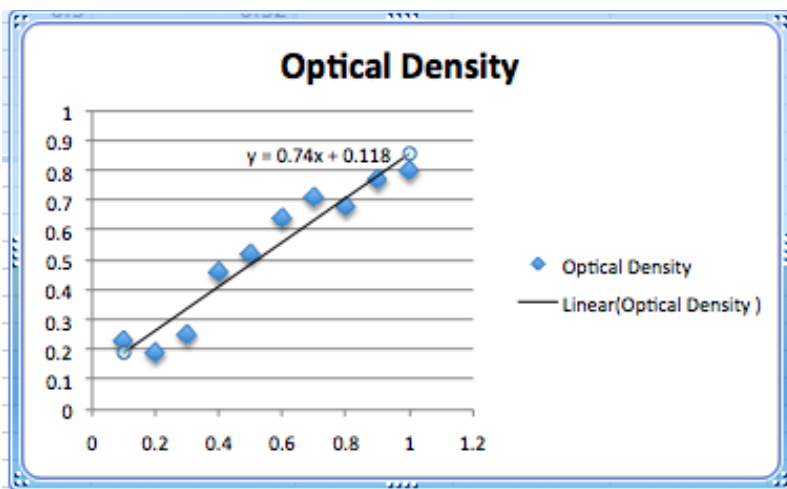


9. A “Format Trendline” will appear. Select “Options” on the right. Then check the box next to “Display equation on chart”. Hit “Okay”.



10. You will see a line of best fit superimposed on your data. Next to this line will be an equation in the format of  $y=mx+b$ . Write down this equation.

In this example, the equation is  $y=0.74x + 0.118$ . This is our standard curve.



## Differences for Excel 2011

A) The excel logo is different. A more standardized green X.



B) At step 5 in the previous protocol, Select “Scatter” as shown below and then select “Marked Scatter”. Skip to step 7 in the previous protocol.

