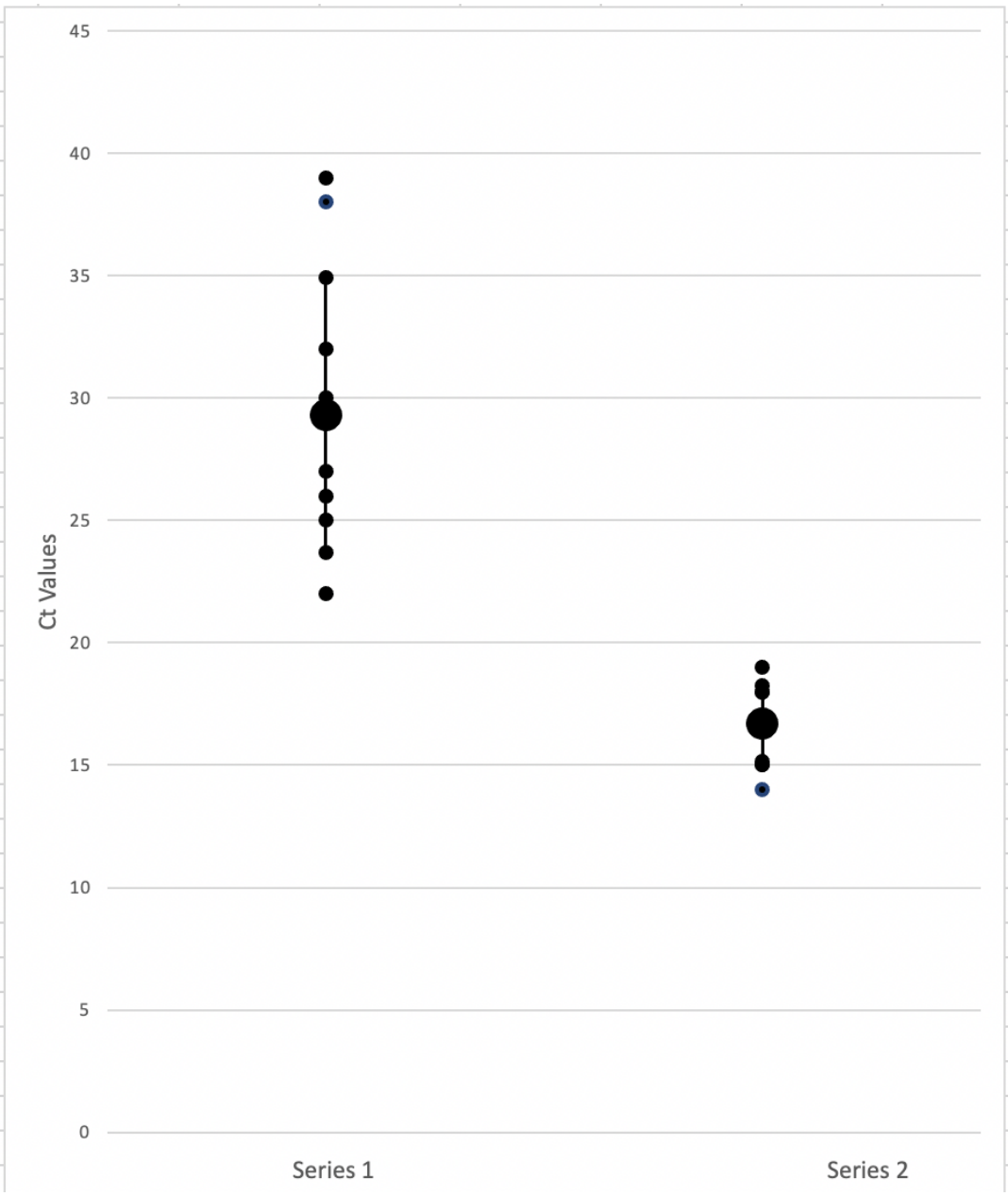
How to use Excel to Plot the data for the TaqMan Experiment



	Series 1	Series 2
	29	15
	25	17
	26	18
	39	15
	25	17
	22	18
	38	14
	30	19
	32	17
	27	17
Mean	29.3	16.7
Upper error	34.9184221	18.2670212
Lower error	23.6815779	15.1329788
Std Dev	5.61842208	1.56702124

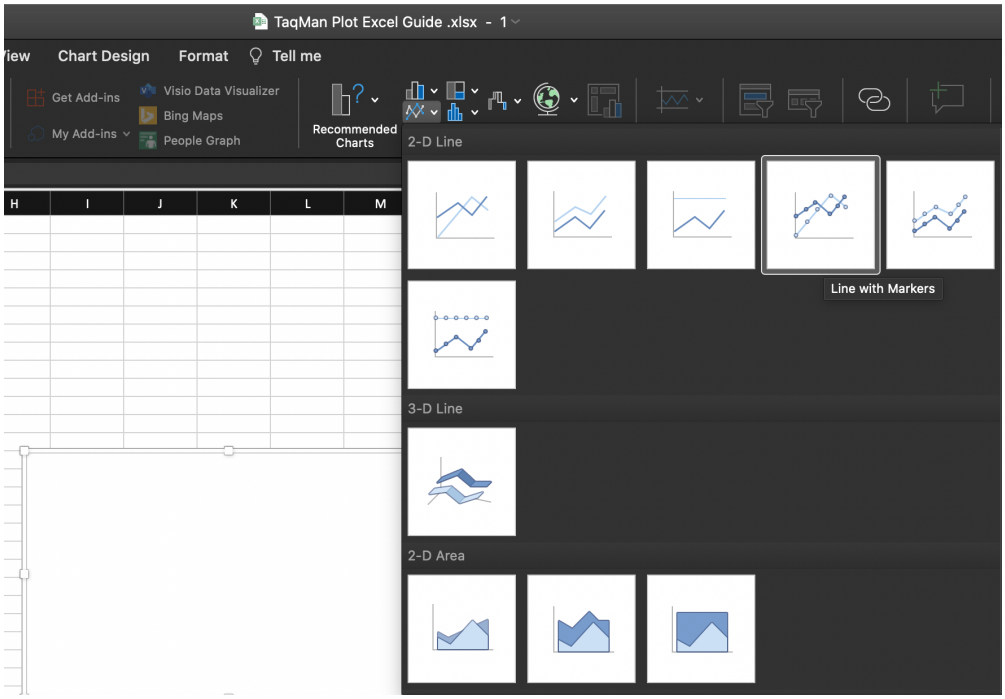
Information on plotting this figure:

Calculate the mean value and then the standard deviation; then calculate the mean +/- the standard deviation (Upper and Lower errors), then Insert and Select the graph format "Line with Markers". Add data, then select "Switch Series". Double click on each series and select "No line". You can then change the colour and size of each data point bby selecting "Format data series" and "Marker": I have selected the colour blak and a size of 2pt. I then moused-over the data points and found the series with the mean values (29.3 and 16.7) and increased the size of data point to 10pt; I then used "Insert" and selected "shapes" and drew a line connecting the mean value with the upper and lower errors. The graph was completed by inserting X- and Y-axis labels (important!)

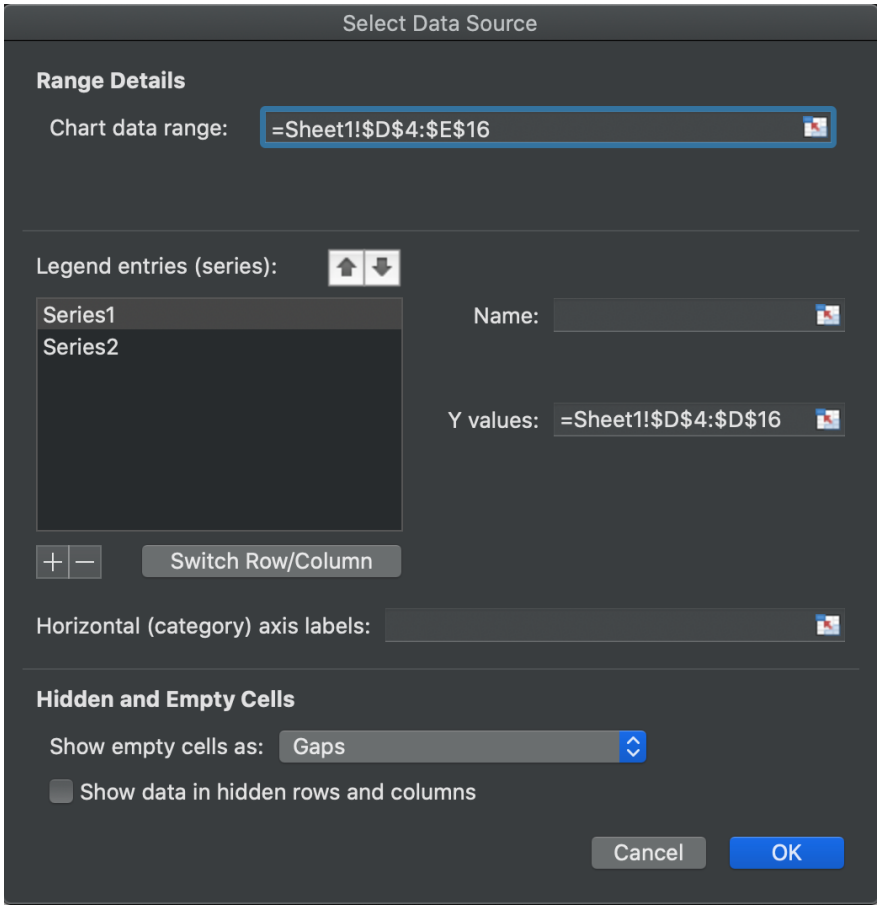
Note the distribution of the data in each datset: the plotting of datapoints outside the standard deviation is not unusual (and in large datasets such data points might be tested for being outliers). The Standard Deviation is a measure of the spread of the data points. Standard deviation is the square root of the Variance, with variance being the average of the squared differences from the Mean. Therefore, the size of the standard deviation is a measure of the spread of the data relative to the mean.

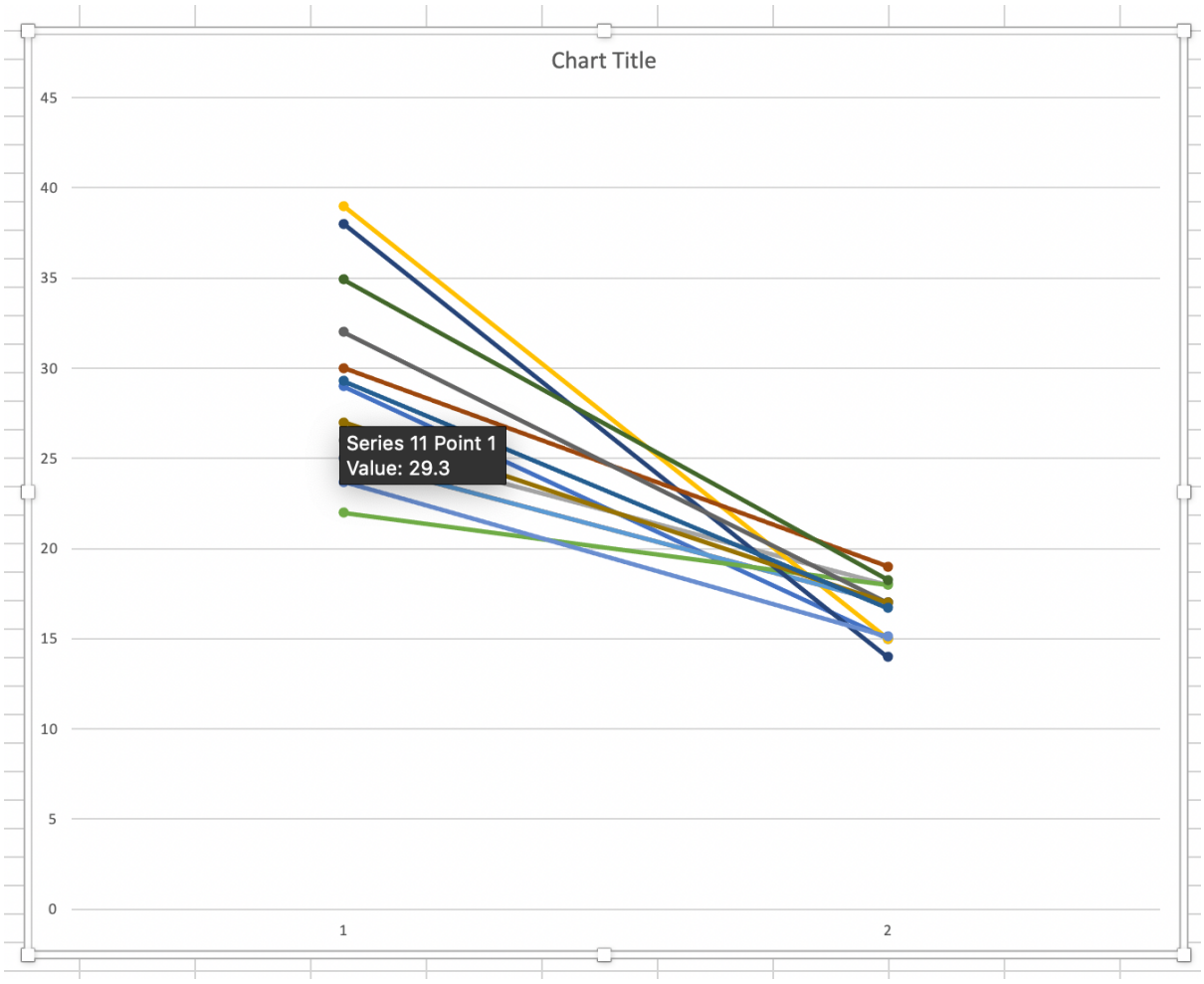
It is important to format the calculation of mean, standard deviation and the upper and lower errors as indicated above as they will be selected as part of the data series

Select “Line with Markers”



Select the range of the data and then “Switch Row/Column”





This is what your graph will look like - you need to delete the lines connecting the two data series and this will leave you with just the the data points.
Note that the Series 11 data point 1 29.3 (the mean value of series 1) can be easily identified by mousing over the data points.

Format data points