

A QUICK GUIDE TO KALEIDAGRAPH 3.0.9

1. To start the program:

- Double click the Kaleidagraph icon.
- Turn on the “Auto Link” under the “Plot” menu. This will automatically update your plot (if already plotted) every time you updated the data.

2. Entering, saving and printing data:

- Re-label the columns (e.g. x, y, sigma, instead of A, B, C) by double clicking on the column label A. In the pop-up “Column Format” window, change the labels A, B, C into x, y, sigma. Click “OK”.
- Enter the data.
- The “File” menu also allows you to “Print Data”.

3. To make a new column which is a function of the other columns:

- Open the “Windows” menu and click on “Formula Entry”.
- In the pop-up window, enter your formula: e.g. $c3=12*\exp(-c1/c0)$ produces $c3$ (i.e. column 3) from columns 0 and 1; then click on “Run”.

4. To plot the data:

- Choose “Gallery”, then “Linear”, then “Scatter”. In the pop-up menu, assign the appropriate columns as X and Y. Then click on “New Plot”.
- In the “Plot” menu, click on “Error bars”; then, in the pop-up, choose “Y err”. In the next pop-up, choose “Data column” to display the uncertainties σ_i as error bars on the graph.
- To save the graph, select “Save Graph As...” under the “File” menu. Give it a more informative title than “Plot 1”.

5. To fit the data:

- In the “Curve Fit” menu, choose “General” and then “Edit General”. In the resulting pop-up, “New Fit” will be highlighted in the right. Click on “Add” and “New Fit” should appear in the column on the left. Highlight the “New Fit” and give it a meaningful name and then click on edit. In the pop-up, write the fit formula and initial guesses for the adjustable constants, e.g. for a straight line fit, $m1+m2*m0$; $m1=2.5$; $m2=1$. The quantity $m0$ in the formula represents the independent variable, x. After defining the formula, click on the “Weight Data” box and then “OK”. This returns to the previous pop-up. Click “OK” to exit. Go to the “Curve Fit” menu and select “General” and you should see the new formula you just defined. Select the formula and you should see the y column has a check box below it. Check the box and then select the appropriate column for the “Weights” and click “OK”. This returns to the previous pop-up. Click “OK” to exit. The program will then fit the data.
- If “Display Equation” is checked in the “plot” menu, you will see a table of χ^2 etc. Make sure χ^2 is reasonable. If not, check your data, particularly the σ . Print the graph using the “File” menu.