How to Plot a Calibration Curve Using Excel

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| Concentration of Propanol in Hexane (%) | Refractive Index |
| 100 | 1.3829 |
| 80 | 1.3813 |
| 60 | 1.3797 |
| 40 | 1.3781 |
| 20 | 1.3765 |
| 0 | 1.3749 |

Use your Refractive Index data from the Forensic Experiment and follow the steps below:

1. Open Microsoft Excel
2. Enter all the data, keeping the concentration (% poison) in the first column and the Refractive Index in the second column, as shown in the example above.
3. Click and drag your mouse across both columns to highlight all the data
4. At the top of the program screen, select insert and then the XY scatter chart type (choose the graph with data points but not the ones with graph lines connecting the dots yet).

A graph should appear on the screen with dots only, and the data range of your X and Y axis should be constructed automatically from the experimental data you’ve entered.

1. Right click on one of the data points in the graph, and select add trendline. A window should open, displaying different line options.

Choose a linear trendline. This will give you the best fit line (it should be a straight line through the middle of the data points, but may not touch all or any of the points)

At the bottom of the window, tick the box to display equation on the chart, and to display the R squared value on the chart. Your chart should now display these values and contain a best fit line.

1. At the top right of the program screen, there should be a section entitled ‘chart tools’ with design, layout and format options. In the Gridline option, enable both major and minor gridlines.
2. Select the chart and Axis title tabs to enter the name of your chart, X and Y axis.
3. Copy and paste your chart into your report document
4. Plug your refractive index value obtained for tube B into the equation as the Y-value, then solve for X. Show all calculations.