

# Formatting Graphs for Scientific Reports & Presentations

## 1. Introduction

- Graphs plotted in Excel are often copied and pasted into other locations usually scientific reports (e.g. lab report, essay or another assignment in MS Word) or scientific presentations (e.g. in MS PowerPoint).
- It is important that the graph be formatted appropriately in Excel, otherwise the graph loses visual impact and may not even be legible when pasted into the document or presentation slide.
- Regardless of the end location of where the graph is to be used, the following changes should always be made to scatter graphs of data:
  - **Locate the x-axis at the bottom & y-axis at the left hand side of the graph** (unless the range of data being plotted includes negative values).
  - Use the **minimum number of decimal places** necessary on each axis.
  - **Adjust the minimum number on each axis to minimise any ‘empty space’ on the graph**, ensuring that the data occupies as much of the plot area as possible.

The following guidelines describe how all graphs should be formatted depending on whether they are to be used in a report or presentation.

## 2. Formatting Graphs for Reports (e.g. .docx)

- **Do not put a title on the graph** – a caption should be placed underneath the figure in the Word document instead.
- Keep colour to a minimum. All text, numbers & labels should be **black**. All chart & plot areas should be **clear/white**.
- Only use colour on the data points & their associated lines/trendlines but if these are to be printed in black & white adjust the shading and/or patterns in the lines /trendlines/bars to emphasise different series.
- The font size of any text, numbers, axis & trendline labels should be increased to size 16 (this corresponds to size 12 font when pasted into a MS Word document).
- Do not increase the thickness of any lines on the graph, e.g. trendlines, axes & error bars.
- For data points use the default marker size.

## 3. Formatting Graphs for Presentations (e.g. .pptx)

- Either put a title on the graph **or** put a title on the slide in the presentation – **do not do both**.
- Use lots of colour – use dark text on a bright background or vice versa. Use colours that match or compliment the colour of the slide design theme being used in the presentation.
- Do not use black text on a navy background or yellow on a white background.
- Use different colours for the chart area, plot area and equation of the line area.
- The font size of any text, numbers, axis & trendline labels should be increased to **size 20** (any smaller and the text will be too small for the audience to read).
- Increase the thickness of any lines on the graph e.g. trendlines, axes & error bars to make these stand out more.
- For data points increase the marker size to **size 8 – 12**.