CIE Chemistry IGCSE

AO3 Practical Skills 4: Interpret and evaluate experimental observations and data

Flashcards

How are observations most commonly recorded in chemistry?

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In data tables

Where should the units of measurement be placed in a data table?

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In the column headings

Describe how the dependent and independent variables are set up in the table

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The independent variable should be in the first column of the table.

The dependent variable should the next column(s).

Why is qualitative data normally displayed in a table?

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Tables allow all observations to be easily recorded and analysed.

What should be included in a conclusion?

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- Reassert the hypothesis
- State whether the data supports the hypothesis
- Use scientific knowledge to explain the shape/trends of graphs and data
- Evaluate the results and suggest relevant improvements

What type of data is suitable for displaying on a graph?

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Quantitative data

Why are graphs often used to display data?

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They clearly show patterns and trends in the data and make anomalous results easy to spot.

For a graph of results, which axis do the independent and dependent variables go on?

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Dependent variable - vertical y axis

Independent variable - horizontal x axis

Describe how to draw a line of best fit

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- Use a sharp pencil
- If the trend is a straight line, use a ruler to draw a continuous straight line through the points.
- If the trend is a curve, draw a continuous freehand curve to connect the points.

How can an anomalous result be identified from a scatter diagram?

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Anomalous results fall outside the trend so they will not lie on/ near the line of best fit.

To what degree of accuracy should results be written in a table?

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Results in a column should all be given to the same degree of accuracy. This should be appropriate for the readings that were taken.