

# How does boiling point change with pressure?



## **Education in Chemistry**

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## **Answers**

1. Suitable graph drawn (x-axis: Absolute pressure in mmHg; y-axis: Boiling point of water in °C) and curve of best fit drawn.

2. As the pressure increases the boiling point of water increases.

The relationship is non-linear with the change in boiling point increasing dramatically with small increases in pressure at low pressure, but the effect becoming smaller as the pressure increases. For example, an increase in pressure from 100 to 200 mmHg results in an increase in the boiling point of water of 15°C (from 52°C to 67°C) whereas an increase in pressure from 800 to 900 mmHg only increases the boiling point of water by 3°C (from 102°C to 105°C).

3. a. approx. 23 mmHg

b. Vacuum = 760 mmHg – 23 mmHg = 737 mmHg