

WJEC Chemistry GCSE

Specified Practical 1A

Determination of Melting Point

[Methods are adapted from the [Royal Society of Chemistry](#)]

England Specification



Melting Points

If a substance sample is pure, it will have a sharp melting point the same or very similar to the value quoted in data books.

If impurities are present the melting point will be lower than expected and the sample will melt over a range of several degrees.

Aim

To determine the purity of various substances using an electronic melting point machine and observations.

Equipment

- Electronic melting point machine
- Thermometer
- Substance samples (eg. naphthalene and wax)
- Data book
- Capillary tubing

Method

1. Set up the electronic melting point machine with a thermometer to measure the melting temperatures.
2. Use a capillary tube to pick up some of the substance being analysed.
3. Insert into the melting point machine and watch carefully to see when the substance melts. Record the temperature at which this occurs.
4. Compare this temperature to the stated data book value for melting point.

Safety Precautions

- Capillary tubing can break easily if not handled carefully.
- Take care when using the melting point apparatus as it can get very hot.



Diagram

