

LAB 4: COOLING CURVE OF PARAFFIN

AIM: To determine the melting point of paraffin from a cooling curve

APPARATUS & MATERIALS:

retort stand	paraffin
boiling tube	water
thermometer	stopwatch
bunsen burner	

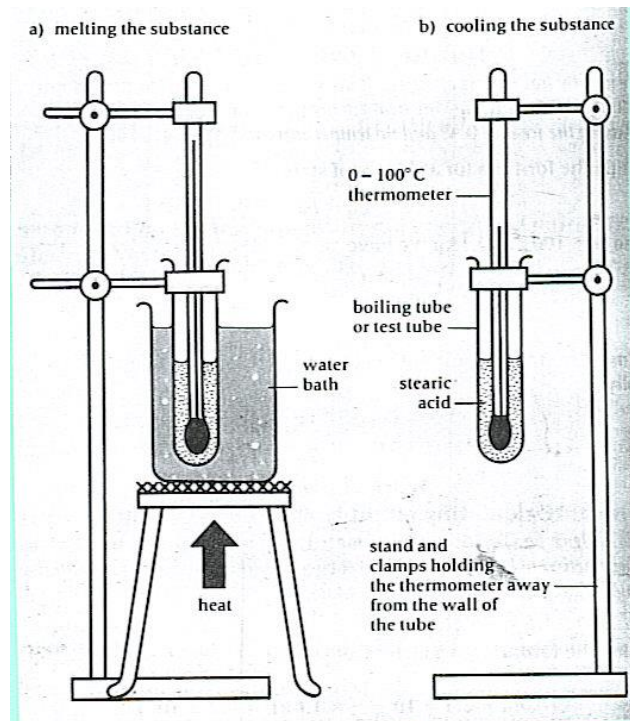


Diagram: Apparatus used for the melting point of paraffin

METHOD:

- Put some paraffin in a boiling tube and heat the boiling tube in a water bath as shown in the diagram.
- When all the paraffin has melted and reached 100°C , carefully lift the boiling tube from the water bath.
- Using a stopwatch, record the temperature of the substance every minute until all of it has solidified and cool below its freezing point.

THEORY:

- Define the melting / freezing point of a substance
- Define the specific latent heat. State the formula and the units.

RESULTS:

- Record all results in the table below (showing all headings and units)

Time (minutes)	Temperature (°C)

- Plot a cooling curve (temperature against time) for paraffin.

CONCLUSION:

- State the melting point of the paraffin.
- Describe the shape of the cooling curve of paraffin.
- List the precautions and sources of error in this experiment.

NOTE

1. Having the boiling tube ready mounted in a stand while it is being heated allows it to be lifted safely from the boiling water and allows temperature readings to be taken immediately.
2. Clamping the thermometer separately so that the thermometer bulb does not rest on the wall of the boiling tube gives a better graph because the glass wall of the tube cools below the temperature of the substance inside.
3. Before removing the thermometer, first melt the substance.