

Determination of Boiling Point

Experiment 15 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To measure the assigned physical constant and interpret its limitations.

Principle

A liquid boils when its vapour pressure equals ambient pressure. Pressure, thermometer placement and the apparatus affect the measured temperature.

Requirements

- Assigned solid or liquid
- Calibrated apparatus, suitable thermometer and PPE

Procedure

1. Select apparatus

Use the approved micro-boiling or demonstration apparatus and record the method.

2. Check calibration

Verify the thermometer and note atmospheric pressure if required.

3. Observe

Heat safely under the prescribed setup and identify the instrument-defined boiling condition.

4. Record

Enter repeated temperatures and compare with the assigned pressure-corrected value.

Observations and Record

Observation	Trial 1	Trial 2
Onset / measured temperature, degrees C	_____	_____
Completion / repeated reading, degrees C	_____	_____
Pressure / calibration check	_____	_____

Result

Record the observed outcome and calculated value, with units. State whether the stated laboratory specification was met; do not copy the worked example as your result.

Precautions

- Use a controlled heat source appropriate to the liquid.
- Do not seal a heated boiling setup.
- Do not use direct flame for flammable liquids.

Viva Questions and Answers

1. Is the constant alone proof of purity?

No; it is one part of identity and purity assessment.

2. Why control heating rate?

Fast heating creates thermal lag and inaccurate readings.

3. Why use repeats?

They help reveal inconsistent conditions or reading errors.

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