

## MELTING POINT

### DETERMINATION OF MELTING POINT

**Experiment Number:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Aim:** - To determine the melting point of the given sample.

**Materials required:** - Thermometer, Capillary tube (or fusion tube), Beaker (100ml), water (or paraffin wax), Glass rod, Tripod stand, Iron stand, Wire gauze, Bunsen burner etc.

**Theory:** - Melting point is defined as the temperature at which a solid substance changes into liquid state. It is a characteristic property of a crystalline solid.

**Procedure:** - Take a fusion tube and fill the tube with a little of the given powdered sample. Gently tap the bottom of the tube on the table so that you get about a **1cm** column of the powder.

Tie up the tube with a thermometer, using a thread, in such a way that the mercury bulb of the thermometer and the powder column are at the same level.

Introduce the thermometer along with the fusion tube containing the sample into a beaker containing water and clamp it on to an iron stand. Care must be taken to see that, the open end of the fusion tube is out side the surface of the water, so that water does not enter the fusion tube.

Heat the beaker gently, constantly stirring the water to maintain uniform heating. Note the temperature when the solid sample **just** changes into liquid.

Record the temperature in the table given below. Repeat the experiment to get a second reading.

Find the average of the two readings and submit the average as the melting point of the sample given.

Trial	Temperature, $^{\circ}\text{C}$
1	
2	
Average Temperature	$^{\circ}\text{C}$

**Precautions:**

1. Powder the solid sample well before filling the fusion tube.
2. Take only a small quantity of the sample to get a better result.
3. The level of the water taken should not exceed beyond the open end of the fusion tube.
4. Heating should be done slowly and steadily with constant stirring.

**Result:**

The melting point of the given sample is ----- $^{\circ}\text{C}$