

Name \_\_\_\_\_  
\_\_\_\_\_

Section \_\_\_\_\_  
Date \_\_\_\_\_

## Melting Point & Intermolecular Forces

### DATA SHEET

#### Part A: Melting point analysis for known compounds

Collection I	Biphenyl	4-Dimethylamino benzaldehyde	Acetanilide
Literature mp (°C)	69	74	114
Experimental mp (°C)			

Collection II	Benzoic Acid	Acetylsalicylic Acid	Salicylic Acid
Literature mp (°C)	122	135	159
Experimental mp (°C)			

Collection III	2-Chlorobenzoic Acid	2-Bromobenzoic Acid	2-Iodobenzoic Acid
Literature mp (°C)	142	147-150	162
Experimental mp (°C)			

#### Part B: Melting point analysis for unknown compounds

Unknown Code			
mp (°C)			

## Melting Point Apparatus Instructions

### **Set Up Melt**

- Press the **\*\*Return\*\*** key (button with the left arrow).
- A prompt will ask you to 'Set the Temperature'.
- Use the keypad to enter the desired temperature
- Set the MEL-TEMP apparatus to 10°C below the melting point of your compounds and press **\*\*Return\*\***

### **Set Ramp Rate**

- Choose ramp rate:  
Press **\*\*2\*\*** for 10.0°C/min.

### **Heating Process**

- As the apparatus heats, four asterisks will appear, showing the temperature progress.
- When the set temperature is reached:  
The apparatus will beep three times.  
The asterisks will stop flashing and display constantly.
- Wait a couple of minutes for the temperature to stabilize.

### **Insert Samples**

- Place the chemical samples into the apparatus.
- Wait a few minutes for stabilization.
- Press the **\*\*Return\*\*** key to start ramping.

### **Record Melting Points**

- Observe and record the melting points on the data sheet as the samples melt.
- The melting point range is:  
Initial: first signs of liquid.  
Final: when liquid is completely clear.

### **Complete Process**

- After all samples have melted, press the **\*\*Return\*\*** key five times.
- Choose to keep the oven on (press **\*\*2\*\*** for yes) if you will do more melting point tests.

### **Prepare for Next Sample**

- Set the MEL-TEMP apparatus to 10°C below the lowest melting point of your compounds.
- Set the ramp rate to 10°C/min.
- Wait for the apparatus to stabilize (you'll hear a beep).
- Insert three capillary tube samples.
- Wait for stabilization, then press the **\*\*Return\*\*** key to start heating.