

**Chemistry 235**  
**Experiment 1 – Report Sheet**

<b>Name:</b>	<b>Lab Room:</b>	<b>Desk #:</b>
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**Pre-Lab Questions** (Complete Prior to Lab)

1. Define the “melting point” of a substance.
  
  
  
  
  
  
  
  
  
  
2. Why should you always use a new capillary tube when performing a second melting point determination on your sample?
  
  
  
  
  
  
  
  
  
  
3. Why is it necessary to allow the Mel-Temp to cool before performing a second melting point determination?
  
  
  
  
  
  
  
  
  
  
4. Given a sample of a eutectic mixture containing 60.6 mol % naphthalene and 39.5 mol % 1-naphthol, which melts sharply at 61.0 °C, how could you prove that it is not a pure substance? What would you do and what would you observe?

**Experimental Data** (Complete During Lab)

<b>Experimental melting point of benzoic acid</b>	
<b>Experimental melting point of 2-naphthol</b>	
<b>Mixed melting point of 1:1 benzoic acid/2-naphthol</b>	

<b>Unknown #</b>	
<b>Melting point of unknown</b>	
<b>Potential unknown possibilities</b>	a. b. c.
<b>Mixed mp of unknown + a</b>	
<b>Mixed mp of unknown + b</b>	
<b>Mixed mp of unknown + c</b>	
<b>Final Identity of Unknown</b>	

### Post-Lab Questions (Complete Following Lab)

1. In the experiment you used only 2-3 mm of sample in the melting point tube. What disadvantage is associated with using too much material?
2. Should you use the same melting point apparatus for all melting point measurements or is it okay to use a different one for each measurement? Explain.
3. The Mel-Temp method is generally not useful for determining the melting points of inorganic compounds. Explain why. *Hint: look up the melting point for a simple inorganic compound such as  $\text{MgBr}_2$ .*