Chem 2062 Spring 2006
Minilab 30 worksheet

1. Describe all observations from this experiment in detail.

2. Calculate the theoretical yield of nitronaphthalene using your actual amount of naphthalene as the limiting reactant.

3. Calculate your crude percent yield.

4. If your crude yield was below 100%, thoroughly explain why this is the case, using *specific* examples from your procedure. If your crude yield was above 100%, specifically explain why this is the case, and what can be done to remedy this. If your crude yield is between 95% and 105% you are unfortuntately most likely suffering a combination of the above two issues, so explain them both.

5. Record the melting points of the crude and recrystallized product (if possible). Compare these to the literature melting points of the two possible products. Are you able to assign the product by melting point?

6. What other methods could you use to determine the identity of the product, and what specifically would you look for?

7. Draw *all* resonance structures for each of the two sigma complexes resulting from nitration at the two possible positions.

8. Which sigma complex is more stable? (Hint: resonance structures in which the aromaticity of one ring is intact will be more stable than those where there is no aromaticity)

9. Does this agree with your answer to question 5? If no, explain why not.