

**Chemistry 252 Experiment : #64 Micheal/Aldol reactions Spring 2009**

**REPORT GUIDE Report Due:** Monday, June 15 (checkout)

**For this lab you will write a 'Formal report'**

**This lab is a Synthesis lab.**

**This experiment was done in groups and each group will turn in one report.**

**Turn in your 2 final Micheal/Aldol products that you produced with your report.**

Label the vial with: Names of group members, weight of sample, moles of sample and melting points

Be sure your report has these sections (in order on the lab report): Purpose, Theory, Data, analysis, conclusion and questions to be answered.

**Finer points**

The Purpose should be the 2 step reaction equation sequence (forming the chalcone followed by the final Michael Aldol product) for the **two** Michael aldol products that your group produced (do not write the reactions sequences that didn't work out)

The Theory is the mechanism for **one** (not both) of the reactions sequences above—Be sure to show both the mechanism for the chalcone formation as well as the Micheal/Aldol product formation.

For the Data section. Draw the structures of each chalcone and Micheal/Aldol product that was attempted. By each structure record the weight & mp of **all** reaction products produced by all group members (even low yielding reactions).

Be sure to attach the NMR spectra of the 2 final Micheal Aldol products you produced.

For the analysis section Calculation for % yield for each reaction attempted. Comment on this data in regards to the success of each reaction and to the purity of the product(s).

Analyze the NMR spectra with the appropriate interpretation (as you did for the NMR day unknown).

For the conclusion, surmise all the data and state if you succeeded in synthesizing 1 mmole of PURE Michael Aldol products.

Additional questions

1. Draw the structure of a cis and trans chalcone. Which did you produce in your reaction and why (why was one isomer produced over the other)?

