

## Checklist for Organic Chemistry Lab Reports

### Pre-labs

- Does the prelab contain all the necessary labeled sections, including
  - Title and objectives
  - The reaction (if applicable)
  - The mechanism (if this is a reaction we have discussed at some point)
  - A complete table of reagents (you can get values from the Aldrich catalog)
  - A separation flowchart if you are doing separation/extractions
  - Complete procedures
  - A space for observations and calculations?

### During the lab

- Have you recorded all data to the appropriate number of significant digits for the device you are using, especially
  - Scales
  - Thermometers?
- Have you recorded all melting points as ranges?
- If required, did you submit a properly labeled sample to the instructor?
  - The label should have your name, the compound's name, and melting point if applicable. Example:

John C. Student  
carbamazol (recrystallized)  
mp: 147.5-149.0 °C

### After the Lab

- Did you carry out all calculations to the correct number of significant digits?
- You should be sure that your discussion section *analyzes* your results and potential sources of error, as opposed to merely summarizing the procedure a second time. (Remember, the length of this section varies by experiment and the degree of success you had with the experiment. If your experiment did not go well, an intelligent discussion is the best way to make up for it.)
- If you obtained spectra (or were provided with them), have you thoroughly analyzed them in the discussion section, indicating
  - The most significant peaks *only* in an IR spectrum
  - All peak assignments for proton and carbon NMR?
- Did you include a conclusion section that *briefly* recaps the most important physical data, including (if applicable)
  - Unknown number(s)
  - Melting/boiling points
  - Percent yield?
- Did you answer all required post-lab questions (listed on the course web site) in complete sentences and with the proper number of significant digits in your answers (where applicable)?
- Did you proofread your text for errors, and perhaps have someone else proofread your report for a second opinion?