Beaudry Group Notebook Guidelines

1. Notebooks are owned by the regents of the University (not by you and not by me) and should never leave the lab. Publishing, patents, theses, and all kinds of other activities hinge on extracting information from these books. Notebooks are a record of what was done experimentally, and need to be useful for other people (not just the experimentalist). The notebook is a road-map for navigating all the experiments done on a project, the data collected, and the order of events that took place. Please take pride in the quality of your notebook. Notebooks are not supposed to be works of art – and they can have words crossed out, short-hand, abbreviations, etc. But they have to be legible and have enough detail that the experiments can be understood and repeated.

2. Leave the first 10 pages blank so you can fill in a table of contents.

3. For each chemical experiment use exactly one page in the notebook.

4. Write legibly with ink on both sides of the page.

5. Fill in the notebook <u>as you conduct</u> the experiment (not on another sheet, not a day later).

6. Each page of the notebook should have a minimum of:

   a) The date the reaction was started

   b) The chemical equation

   c) A list of starting materials, reagents, and solvents with stoichiometry

   d) An experimental procedure (do not just reference some other page)

   e) A chemical yield (percent) or indication of the result of the experiment (decomp, NR, etc.)

   f) A color photocopy of the TLC plate with conditions listed (do not draw a TLC)

   g) An accompanying routine ^{1}H NMR spectrum in the binder

7. See the example below from my postdoc days. Notice that it's not perfect. I forgot to write $NaHCO_3$ as a reagent so I listed it below the solvent (you can see in the procedure that I did, in fact, add the reagent). My handwriting is not great, but it's legible. I crossed out some things in the procedure and used abbreviations like "FCC" for "flash column chromatography". I also used a shorthand for the workup: $NaHCO_3/CH_2Cl_2$ means the reaction was quenched with saturated aqueous $NaHCO_3$ solution and extracted with CH_2Cl_2. However, it's got everything listed above, and the TLC has three lanes (SM, co-spot, reaction). An experienced organic chemist should be able to reproduce this result and yield.

8. Feel free to leave a commentary on what to do next, a journal reference, why things didn't work, or any other information that could be used in the future. Most successful reactions get repeated, so you should always be thinking about ways to render them more efficient.

04/27/09

Alcohol MW372	21.2g	(.057mol)	1.0
DMP MW 420	26.6g	(.063mol)	1.1
CH_2Cl_2 1.1L (.05M)			
$NaHCO_3$ MW84	48g	(.57mol)	10

~~Alc~~ Alcohol in ~~THF~~ DCM + $NaHCO_3$ 15min + DMP. 30min Done by TLC. $NaHCO_3$/CH_2Cl_2 (Filter through Celite to break emulsion). FC 10:1 H:THF

→ 15.72
MW370
75%

6:1 H:EtOAc