NOTEBOOK FORMAT

An early consideration with regard to your organic chemistry notebook is what format does your instructor want. While some suggestions and guidelines will be presented here, your instructor will tell you what the sequence and content of your report should be. Remember you are writing the notebook so that **others** can follow what you have done and attempt to reproduce it. For scientific results to be meaningful, the results must be reproducible. All observations must be recorded immediately in your notebook. Never record results on scratch paper with the intention of transferring them later. In industrial settings, the results must be recorded in ink. When mistakes are made, the results are crossed out, never erased. Ask your instructor if ink is necessary or if pencils are acceptable and what kind of notebook he/she prefers. Generally the report should include the following:

1. Purpose of the experiment.
2. Laboratory preparation:
   Pertinent reactions (if a reaction is involved)
   Properties and amounts of reactants (include sources of information) in a neat table.
   Properties of possible products with space for amounts of products.
3. Source of procedure and details of any modifications. Ask your instructor if it is necessary to record the details of the procedure that are recorded in the source of the procedure.
4. All important observations especially any that are unexpected.
5. Results:
   For separation and purification experiments, a comparison of before and after properties and % recoveries from each technique.
   For synthesis, properties, identification and % yields of products.
6. Conclusions:
   Has the purpose of the experiment been achieved? Be sure to explain this in detail.
   Relate the experiment to concepts covered in the classroom part of the course. Has this experiment been relevant?
   For experiments that include a reaction, be sure to include a mechanism.
   Very few experiments in organic chemistry give 100% yields. Try to account for any losses of material.
   Try to suggest ways to improve the experiment from the perspective of learning, time used and yield results.