

Rubric for Organic Chemistry Lab Reports

Title Page: 12 pts as listed below.

Name: 3 pts

Experiment Number: 2 pts

Experiment Title: 3 pts

Course Title and Number: 2 pts

Organic Chemistry Laboratory II

Spring 2012

CHEM 3420-0x

Date: 2 pts

Summary or Abstract: 2 pts

Summarize the entire experience. Use only past tense.

Introduction and Objectives: 6 pts as described below.

Background information: Description on the lab exercise in specific terms. Students may briefly include information describing why this procedure is important. 2 pts. Background may be in past tense.

The purpose of the lab exercise is to be written here. 2 pts Purpose must be in present tense.

Example "The purpose of this lab exercise is to synthesize indole-3-acetic acid."

Students may use present tense or past tense as appropriate. The introduction needs to be grammatically correct. 2 pts

Reactants and Products: 10 pts

chemical structures 10

Write the complete reaction, including arrows, intermediates, charges, etc. for the reactions. Name all of the reactants and products. The figure(s) may be drawn by hand if the product is neat and legible.

Laboratory Precautions and Chemical Hazards: 10 pts

Students will fill out a form based on the MSDS. Do not print copies of the MSDS. The form will be available on the LMS.

Laboratory Procedures: 4 pts

Students will describe the procedures followed to fulfill their objectives. The procedure in the lab manual may be referenced without additional comment unless changes were made. References require title, author, date of publication, and page number. If modifications to the procedure were followed, these changes must be described in detail.

Description must be grammatically correct and in past tense.

Observations and Calculations: 16 pts

All observations should be in past tense and in grammatically correct format (4 pts). All data needs to be presented in a neat and legible format (5 pts more or less depending on need for calculations and or figures). Tables, graphs, and or figures need figure legends as appropriate for the individual experiments, (5 pts. more or less depending on need for calculations). Finally, 2 pts are for presentation in a logical order with accessible placement of figures and calculations.

Discussion and Conclusion: 20 pts

The experiment in its entirety is to be described (6 pts). Statements are to be referenced as appropriate (2 pts). Discussion of the experiment must be grammatically correct in past tense (3 pts). Students need to state clearly if the objective stated above was met (3 pts). No points are to be deducted for an accurate, but negative response. Use the personal pronoun "I" very sparingly or not at all. The experiment is not about you. The experiment is about the objective. Focus on the object, not on yourself (3 pts.)

If the results were less than hoped for, such as a poor yield, then discuss why this poor yield occurred. For example, "It was raining the afternoon of this experiment and the Grignard reaction is sensitive to moisture." Or, "The product was spilt before the filtration occurred. If the procedure were repeated, extra care should be taken at this step."

If the results were good, state that the objectives of the experiment were met as anticipated. Your discussion in the case of a good outcome may be shorter than for one in which the results were less than expected.

Overall impression of the results subjective evaluation are worth 3 pts.

References: 10 pts

Refer to the handout from last semester.