

CHE 241 Laboratory Report Rubric, Spring 2009

	Distinguished	Proficient	Apprentice
Experimental Plan	Includes a concise statement of the problem as well as a plan for how to solve it. Relevant references are correctly cited.	Minor grammatical errors in statement of problem and/or minor citation errors. Incomplete citation.	One part of experimental plan missing or there are significant errors in plan. Absent citation
Reaction Summary (when appropriate)	All reactions are clearly drawn using structures – main reaction and side reactions. Mechanism(s) provided.	Reactions are messy or minor error appears. Used molecular formulas instead of structures.	One significant error in reaction. Mechanism or side reaction(s) missing.
Table of Reagents and Products	All starting materials, reagents, and products appear in table with all relevant amounts and physical properties. Concentration information included for solutions.	One or two physical properties are missing from table, or table is slightly messy.	Data are not presented in table format. One or two compounds are missing from table, or several physical properties are missing.
Calculation of Theoretical Yield	Theoretical yield calculation is correct and neatly labeled.	Minor error in theoretical yield calculation, or calculation is messy.	More than one error in calculation.
Flow Diagram	Includes all procedures to be followed, with reasonable understanding demonstrated for the purpose of each step. Uses skeletal structures for compounds.	Most steps are correctly shown in diagram, with only minor errors about what steps accomplish.	Significant errors about what steps accomplish, or multiple steps missing from diagram.
Data and Observations	Appropriate detail of observations, with all masses, volumes, and relevant information recorded. Easy to follow.	Inadequate observations, but all relevant data recorded. Slightly difficult to follow.	Observations irrelevant and/or data difficult to locate in lab notebook.
Yield Data	Product is described fully – appearance, mass, and physical properties. Properties of product are compared to literature values. When appropriate, percent yield or other well labeled calculations are provided.	Product description is incomplete.	Product properties are not compared to literature values.
Discussion and Conclusions	Conclusions are reasonable based on correct interpretation of data. The section is well written, with no grammatical errors. Proposes ways to improve experiment next time.	The section has minor grammatical and/or spelling errors. Conclusions are not adequately justified by the data.	Data are incorrectly interpreted and/or conclusions are not relevant based on the data obtained in the experiment.
General	Typed pages are double spaced. Report is in correct order and is stapled.	Typed pages are single spaced. Report is out of order and/or not stapled. Common misspelled words: vial, separate, perform This used without referring to a noun	Report not submitted to turnitin.com
Exercises	The section is well written, with no grammatical errors.	The section has minor grammatical and/or spelling errors.	The answers are not written in complete sentences and/or provide incorrect chemical information.

