

Experiment 1: Use of Volumetric Ware and Balances, and Determining Significant Figures in Equipment

Format & Clarity of the Report: The report is easy to read. Work reflects total integrity and accuracy.

Perfect	Meets expectations	Needs work	Unacceptable
All of above is completed with clarity, neatness, and attention to detail. The student correctly correlated observations and the identity. Organization was easy to follow, all parts of the lab were easy to find.	Meets expectations, report is complete, but just so. The report follows format, but is messy or disorganized, and missing one of the items above.	Good effort, but report reflects a lack of care on the part of the student to work with precision and accuracy. However, the student answered the questions and very little was left blank. Organized but difficult to read-messy.	Parts of the lab were missing and the rest are poorly executed. Very messy. Lacks attention to detail. The student did not put the time necessary to understand the steps in the lab. It is confusing to other readers, and is difficult to follow and/or read. Four of the items listed above are missing.

Data Tables The data was neatly recorded in the data tables provided. The data was appropriate and easy to follow.

Correct units were used. Correct significant figures were used. Pictures were neatly done and easy to follow.

Perfect	Meets expectations	Good,	Needs work	Unacceptable
All of above is completed with clarity, neatness, and attention to detail. Organization was good.	Tables were messy but units were presented and sig fig rules were followed. Once or twice sig figs OR units were missing	Good work, room for improvement. Student had most of the table filled in correctly. Two to three errors in sig figs or units. Pictures were reasonable	Good effort, parts were left blank, more was wrong than correct about sig figs and units.	Data entry in table was poorly executed. Lacks attention to detail. The student did not put the time necessary to understand the steps in the lab. It is confusing to other readers. Pictures missing or poorly executed

Calculations Section: Calculations were clearly shown. Proper significant figures were used in answers. Proper units were used in the answer. Student showed, through calculations, a clear understanding of steps in the lab. No math errors present. Calculations were easy to follow.

Perfect	Meets expectations	Good,	Needs work	Unacceptable
All of above is completed with clarity, neatness, and attention to detail. Organization was good.	Tables were messy but units were presented and sig fig rules were followed. Once or twice sig figs OR units were missing. Calculations were correct, and easy to follow	Good work, room for improvement. Student had most of the table filled in correctly. Two to three errors in sig figs or units. Most of the calculations were correct, and easy to follow. Answers made sense.	Good effort, parts were left blank, more was wrong than correct about sig figs and units. Errors in math evident.	Serious errors in math. Presentation of calculations was confusing. Errors abound in sig figs and units. Lacks attention to detail. The student did not put the time necessary to understand the steps in the lab.

Results Tables The data was transferred from the calculations section to a results table that was appropriate and easy to follow.. the table had no cross outs, or errors. table contained no calculations.

Perfect	Meets expectations	Good,	Needs work	Unacceptable
All of above is completed with clarity, neatness, and attention to detail. Perfect results tables; followed the models. the table was neat and easy to read.	Okay organization. Kinds of messy, but cross outs are minimal. Some of the conclusions were incorrect. Results are acceptable.	Good work, room for improvement. Student had most of the table filled in correctly. Two to three errors in sig figs or units. Answers made sense.	Good effort, more incorrect than correct. Organized but difficult to read-messy.	Missing results and the rest are poorly executed. Lacks attention to detail. The student did not put the time necessary to understand the steps in the lab. It is confusing to other readers. Results varied wildly from accepted values.

Post lab Questions: The student thoughtfully answered the questions completely using complete sentences, good grammar, and in standard English. The answers were easy to read and follow. The student answered the questions clearly and concisely. The answers addressed the main thrust of each question. Student is able to relate the importance of newly learned material to previous knowledge.

	1	2	3[a-c]	4 [a-d]	5 [a-d]	6 [a-d]	7 [a-d]	8 [a-d]	attachment
Perfect! All of the above are done. The answers and evaluations are more sophisticated than the average report. Answers reflected student's deep understanding of underlying concepts. The student answered the questions using well-developed logic, good grammar, and spelling.									
Meets expectations. One of above poorly executed.									
Good Job: two of the above poorly executed									
Needs improvement. 3 of above poorly executed.									
Unacceptable. The questions were not answered well or completely. More than two of above poorly executed.									