|  |
| --- |
| **Generic Chemistry Lab Report Guidelines – Specifics given in class supersede these generic guidelines!****Please Note:** *Labs grades are based on quality not just completion! Articulating ideas clearly is key to science!* |
| **REQUIREMENTS** | **AREAS TO IMPROVE UPON** |
| **Format** 10pt Times New Roman or Arial font ONLY 1.5 spaced Bold section headings for everything  8.5”x11” white paper 0.5” margins on all sides Abstract has 2” margins on each side and is single-spaced.  Stapled in following order:o Title page | **Formatting**  1 2 3 4 10pt correct font Yes No0.5-in margins Yes No1.5-in spacing Yes NoStapled In Order Yes No3rd Person Yes No Past Tense Yes NoSection Headings Yes No**Abstract Format**Justified both sides Yes No2-in margins Yes No Single Spaced Yes No  |
| o Lab report |
| o Carbon Copy pages used during lab (Must have HEADER filled out on every page) |
| * Carbon Copy pages used for lab report and post lab Q’s

 THIRD PERSON, PAST TENSE, PASSIVE VOICE!!!!* We know you wrote it…your name is on the

 front…use third person |
| o You already finished the lab before you did your report! Use past tense! |
| o I know your English teachers don’t like passive voice…  but it is appropriate for lab reports! |
| * Active voice: The hot plate stirred the reaction for three minutes.
* Passive voice: The reaction was stirred by the hot plate for three minutes
 |
| **Title Page** It gets its own page! Title of lab Abstract (see below) Group members and how they contributed  (Name, section worked on) Date of lab experiment  Class and period | **Title Page**  1 2 3 4 Own page Yes NoTitle Yes NoAbstract present Yes NoGroup members Yes NoDate Yes NoClass and period Yes No |
| **Abstract** On Title Page (2-in margins) Justified on both sides, do not center on page! The following is to be articulated concisely in no more  than 3-5 sentence sin the order below* Sentence 1: What was the purpose of the experiment? The question or statement. Do not copy from lab handout.
* Sentence 2: What you found out (the results – the silver alloy beads were found to contain X% of silver)
* Sentence 3: How the results were determined (Brief! Specific names of lab techniques if applicable)
* Sentence 4: Report accepted value (if applicable) and percent error.
* Sentence 5: Conclusions made (if applicable), what you drew from the experiment
 | **Abstract**  1 2 3 4  |
| Purpose Yes NoResults Yes NoHow results were found Yes NoNamed techniques\* Yes NoAccepted value\* Yes No | Percent error\* Yes  NoConclusions made Yes  NoShort, concise and clear Yes  No\**if applicable* |
| **Background** – part of prelab if required Do NOT copy info from lab worksheet! Summary/explanation of the important chemistry topics  covered in lab Explain how the topics relate directly to the lab What will your lab be discovering/testing related to the  topics What is your experimental question/variables Include relevant chemistry vocabulary Include relevant chemical equations Include balancing and states for chemical equations Number each equation to make referencing easier Hypothesis if applicable* If \_\_\_\_\_\_, then \_\_\_\_\_\_, BECAUSE \_\_\_\_\_\_. Everyone forgets the BECAUSE portion!
* Relate it back to the topics covered

 Be sure to site any references used including textbook,  website, lab manual, etc. Below is a good explanation of  ACS formatting. * <https://libguides.williams.edu/citing/acs>
 | **Background** 1 2 3 4  |
| In Own Words Yes  NoChem Topics Explained All  Some None or incorrectConnection to Lab All  Some None or incorrectExp. Q/Variables All identified Some identified None\**if applicable* | Defined Vocab All  Some NoneChem Rxns\* All balanced w/ states Some or not bal/states None or wrongHypothesis\* Yes and correct format Yes but lacking Not includedReferences\* Yes and ACS format Yes but lacking Not included |
| **Observations/Data**  Qualitative and quantitative! Must have both! Lab notebook paper only, with data tables and graphs  made/collected DURING the lab Professional appearance* Clear, large, not squished!
* Black or blue ink ONLY

 Descriptive titles Sig figs for measurements and calculations Label graphs/tables with name of measurement and units | **Data Table** 1 2 3 4  |
| Observations Significant, detailed,  thorough  Sufficient Lacking | Professionalism Total pro, ruler  used, readable, etc Good Lacking |
| Titles Strong, descriptive, clear Good, attempt at being descriptive Unclear, not descriptive |
| **Calculations** Work shown completely  Flow of work is clear Work set up correctly to solve actual problem Correct numbers used in work Units provided everywhere Correct answer | **Calculations** 1 2 3 4  |
| Work Shown Significant, detailed,  thorough  Sufficient LackingOrganization of Work Clear Hazy Cloudy | Units All Some None or wrongCorrect Answers All Most Some |
| Correctly Set Up All Most Some None |
| **Data Analysis** Include table and graph of anything you calculated,  manipulated or plotted AFTER the lab. Make sure tables  and graphs are labeled correctly Explain data that you collected Include a few sentences explaining what the graphs/tables  show or indicate Mention any errors and how they affect your data analysis.  Remember “human error” is not an acceptable phrase.  Include percent errors if applicable  Include one sample calculation for each type of calculation  performed Include equations, reactions, units, work, etc.  Define symbols/variables used You may be graded on the accuracy of your lab data and/or  whether your calculations are correct or not  | **Data Analysis** 1 2 3 4  |
| Data/Graphs All included Missing some Not includedLabels All Some None or wrongExplain Data/Graphs All Some NoneErrors Significant errors  Not significant ones Did not explain impact Not included | % Error Yes No WrongSample Calculations All Some None or wrongEq’s, Rxns, Units, etc All Some None or wrongAccuracy Great Ok Poor |
| **Discussion Questions** Answers to provided lab questions, statements, or  calculations with work shown and units when appropriate.  Each Q is numbered and answered in complete sentences.  Restate the question in your answer, do not just copy the Q! Will sometimes be done as part of a formal report as a group, or  done individually on the carbon copy paper in your notebook. * If done on carbon copy paper but a formal lab report is also typed up, then you must include this section heading in the report but simply say “refer to carbon copy pages at the end of the report.”

 Will sometimes be graded for completion, and sometimes  will be graded for accuracy.  | **Discussion Questions** 1 2 3 4  |
| Questions All included Missing some Not includedComplete Sentences All Some None  | Calculations w/ Work All Some NoneCorrect Answer All Most Few None |
| Questions Restated All Some None |
| **Conclusion** Complete sentences, paragraph form Report your final results Include accepted value and % error if applicable Explain why it turned out the way it did – sources of error,  limits in lab design, etc.  Relate findings back to basic principles of chemistry What further experiments might you do to keep studying this? How does it relate to real life if applicable? How could you make improvements to the lab? | **Conclusion** 1 2 3 4  |
| Complete Sentences Yes NoResults Reported Yes NoAccepted Value / % Error Yes NoErrors Yes No | Relate to Chem Topics Yes NoFurther Experiments Yes NoRelates to Real Life Yes NoImprovements Yes No |
| Level of Detail Significant Sufficient Lacking |