

Student: \_\_\_\_\_

Grade: \_\_\_\_\_ / \_\_\_\_\_

Experiment: \_\_\_\_\_

<b>Common Abstract Errors</b>
<p style="text-align: center;"><b><i>Purpose</i></b></p> <p><input type="checkbox"/> Purpose refers to the lab manual or other outside information</p> <p><input type="checkbox"/> Purpose is incorrect (the correct purpose is almost always “to measure ...”)</p>
<p style="text-align: center;"><b><i>Equipment &amp; Procedure</i></b></p> <p><input type="checkbox"/> Abstract lists the equipment rather than describing it</p> <p><input type="checkbox"/> Procedure is too detailed</p> <p><input type="checkbox"/> Procedure is insufficiently detailed or refers to the lab manual</p> <p><input type="checkbox"/> Procedure does not reflect what you actually did</p> <p><input type="checkbox"/> You accepted measurements that are not believable</p>
<p style="text-align: center;"><b><i>Analysis &amp; Uncertainties</i></b></p> <p><input type="checkbox"/> Abstract doesn't state why a plot was made</p> <p><input type="checkbox"/> Abstract blames or credits a plot for making a decision</p> <p><input type="checkbox"/> Abstract blames or credits Excel for making a decision</p> <p><input type="checkbox"/> Result is computed incorrectly</p> <p><input type="checkbox"/> Uncertainty is computed incorrectly</p>
<p style="text-align: center;"><b><i>Results &amp; Conclusions</i></b></p> <p><input type="checkbox"/> Numeric result has incorrect significant figures</p> <p><input type="checkbox"/> Numeric result has bad units</p> <p><input type="checkbox"/> Numeric result uses “E” or “^” notation (scientific notation must be in the form <math>(1.23 \pm 0.04) \times 10^{-2}</math>)</p> <p><input type="checkbox"/> Conclusion blames “human error”</p> <p><input type="checkbox"/> Conclusion doesn't state the primary source of error (what improvement would most improve the result?)</p> <p><input type="checkbox"/> The stated primary source of error was already accounted for</p>
<p style="text-align: center;"><b><i>Mechanical</i></b></p> <p><input type="checkbox"/> Abstract has spelling and/or capitalization errors</p> <p><input type="checkbox"/> Abstract has grammar errors (such as run-on sentences, missing verbs, missing nouns)</p> <p><input type="checkbox"/> Abstract has tense errors (every part should be in past tense)</p> <p><input type="checkbox"/> Abstract uses “would” or “could” inappropriately</p> <p><input type="checkbox"/> Abstract uses a pronoun inappropriately (usually, you don't say what “it” is)</p> <p><input type="checkbox"/> Abstract uses an article incorrectly (“a” and “the” mean different things)</p> <p><input type="checkbox"/> Abstract has poor word choice (usually, a word doesn't mean what you think it does, or is too fancy)</p> <p><input type="checkbox"/> Abstract is not sufficiently concise</p> <p><input type="checkbox"/> Abstract contains forbidden elements (such as pictures or equations)</p>

Comments:

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### Logbook & Excel Grading Checklist

#### *Overall*

- The logbook is the correct quad-ruled, hard bound notebook?
- All pages are numbered, on both sides, including pages that you haven't used?
- Student's name and contact information are on the cover?
- Pages 1 and 2 (Not the inside cover!), at a minimum, are reserved for the table of contents?
- Table of contents is complete for all completed labs?
- logbook has no torn-out pages?

#### *Preparatory Work*

- Pre-Lab quiz work is recorded in the logbook?
- Addresses main ideas, not just answers to questions?
- Main ideas are summarized for easy access?

#### *Lab Work & Effort*

- Recorded lab partner's name and contact info?
- Recorded all *original* measurements (*before* making any calculations or conversions)?
- Recorded all necessary quantities?
- Repeated measurements that were obviously incorrect?
- Uses appropriate symbols for each quantity (including equations on plots)?

#### *Analysis & Uncertainties*

- Has a copy of relevant plots?
- Relates results from plots (e.g., slopes) to basic equations? (i.e., understands purpose of each plot)
- Presents algebraic representations of all uncertainties?

#### *Clarity & Presentation*

- Mistakes, although crossed out with a single line, are still legible?
- Includes complete, clear, labeled drawing of the experiment without extraneous detail?
- Includes a summary table with all relevant quantities?
- Summary includes units and uncertainties?
- Provides sufficient description (procedure) so that someone else could repeat the experiment without the assistance of the lab manual or any other external reference?
- Data, analyses, etc. are not crammed into too small a space or in illogical order?
- All numerical information is labeled (i.e., not just floating numbers without context)?
- Includes an original copy of your abstract?

#### *Excel*

- Recorded all *original* measurements (*before* making any calculations or conversions)?
- Uses only Excel equations for *all* other cells? (that is, you may never enter any value from a calculator)
- Each measured value is entered only once?
- Includes labels and units?
- Worksheet includes all partners' names and the date that the experiment was performed?