**P Chem Lab #2: Review of Classical Methods: the Pendulum**

**Student D**

**Abstract \_0\_/5**

\_\_xx\_g and error listed; mass independence result (best to include slope and r2 for M vs τ and not

unequivocally assert mass independence)

*You need to state the results of your fits here, not the conditions of the experiment. You’ve missed entirely the underlying notion of what the Abstract is for. The bottom line results you attained are what’s needed here.*

\_\_n/a\_Unsubstantiated claims avoided.

\_\_ok\_English mechanics flawless

\_\_x\_No unnecessary verbiage… brevity/succinctness a must

No unnecessary or irrelevant information included

\_ok\_\_ format specified is met (11 pt font 3rd person past tense, Times New Roman or Calibria)

**Introduction \_3\_/6**

\_ok\_\_ goals summarized (test pendulum’s mass independence; verify that the predicted period from

2nd order analysis has form τ=2π(g/L)1/2 in radians, and estimation of g, the terrestrial gravitation constant.

\_x\_\_ reference and/or brief description of underlying theory leading to above equation

*You never explicitly describe where the t=2π(g/L)-1/2 expression comes from. Need to briefly mention its appearance as a result of 2nd order analysis like we did in worksheet. Equation you fit needs to be given a labeled equation # and set off by itself on separate line.*

\_\_\_ definition or clear graphical representation of relevant variables (L, M, θ,τ)

*Both Fig 1 and 2 need more details in title*

\_\_x\_required format : (1.5 spacing, first or third person, font as in Abstract) ; English mechanics ok

*Several places you use vague language: “something like”, `played with’…these are non-starters in scientific and technical writing.*

**Experimental Method \_2\_/4**

\_!\_\_ lab manual source referenced *Use (1) formation, not direct citation in Experimental Method*

\_x\_\_ some specific details, e.g. how do you hold weight to pendulum arm ? What is arm ? (string)

\_x\_\_ picture of pendulum is not necessary but usually a good idea

\_\_ok\_ format followed: single space, past tense ; English mechanics ok

**Results \_4\_/ 7**

\_\_ok\_\_ Results are tabulated in labeled tables

\_\_xx\_\_ Text explains origins of tabulations *A serious problem here. You never preface Results with data, but start with text and reveal data. You also don’t supply sufficient text to help a reader know what’s happening in your figures and tables.*

\_\_x\_\_ Where relevant, error estimates are provided in tabulations…*r2 should be discussed in text*

\_ok\_\_\_ sig figs are correct

\_\_x\_\_ format followed; 1.5 or double spaced; present tense; all tables and figures well labeled .

English mechanics ok *Figures need numbering; Tables come after text*

**Discussion \_\_9\_/13**

\_\_ok\_\_ Results are compared against expected values with relevant % errors listed

Specifically: M vs τ plot remarked on; τ vs. (L)1/2 remarked on; gexp vs gexpected remarked on

\_ok\_\_\_ Sig figs correct

\_\_x\_\_ rational and sober postulations on error sources provided

Your final paragraph really needed to be radically altered. *Working out a single example in Discussion should always be dropped in favor of examining all your data, Run a tabulation of all the fit vs. observed τ and remark on that, rather than a single point (which you could have `cherry picked’)*

\_\_x\_\_ absence of unsubstantiated assertions *be a lot less assertive here. I’ve circled several `red flag’ words and suggested less inflammatory ones.*

\_\_ok\_\_ Format follows that in Results

**References quoted and done correctly \_\_2\_\_/2 \_\_20\_\_/37**