Antacid **Proposal 1**

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Your lab partner’s name(s): Your lab partner’s email(s):

Your lab instructor’s name: Pedro Your lab section: 2A

*All work must be* ***very neat*** *and* ***organized****.* *If you need to collect your thoughts, please use a separate sheet of paper. Proposals are a* ***group******effort****. Please submit the completed document as a PDF to the* ***Antacid Proposal 1*** *D2L DropBox before the scheduled end of lab.*

1. In a complete, well-written sentence, summarize in your own words the **overall goal(s)** for the *Antacid Project*.

The overall goals for the Antacid project are to use an acid-base system that generates a gas as its product, controlling the variables to characterize the reactions and how much product is formed. The amount of gas produced will then allow us to discover how much of a base is needed to neutralize a fixed amount of acid. We can then determine the primary active ingredient in an OTC antacid and compare the acid neutralizing capacity.

2. In your own words, the **goal for this first session** of the *Antacid Project* is…

For session one, our goals for the antacid project include the following. We are to explore the best way to consistently and reliably control the weak base/HCL reaction to be able to plot a VCO2 vs mBase graph that will allow us to identify data for the knowns (CaCO3 or NaHCO3). We will then compare the data with the rest of our peers to compile a class data set that will provide an ample sample size.

3. **Possible Claims for the Project**. In complete, well-written sentences, list some (at least two) of the *possible claims* that could be made in relation to the overall or core goals for this project.

3a. Make a list below of the *information or data* that would be needed to support each of the claims listed above.

3b. For each possible claim given above, write a sentence or two about what you would *expect to see* in the data if the claim was true.

4. **Key Exploration Results**. In complete, well-written sentences in your own words, **clearly summarize** the **key results** from your exploration of how best to reliably control the weak base/HCl reaction conditions for the purpose of collecting accurate and precise data to build *VCO2* vs. *mbase* plots for the **knowns** (CaCO3 and NaHCO3).

5. **Proposal 1**. Based on your exploration, *clearly specify* your group’s contribution towards generating data to build a *VCO2* vs. *mbase* plot for *one* of the **knowns** (either CaCO3 or NaHCO3). This will require your group to run **multiple reactions** for a given **known** (either CaCO3 or NaHCO3) that are *tightly coordinated* with other groups working on the same **known**, so a proper *VCO2* vs. *mbase* plot results. *Because each reaction requires time to prepare and monitor, your group’s reactions should be divided amongst its members and be run independently. Also keep in mind, half the groups of your lab section should work on CaCO3, while the other half focuses on NaHCO3*. Your plan must be complete for just the trials (**multiple reactions**) your group will run and justify the steps. ***Please NUMBER your procedural steps.***

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| Procedural Step | Justification based on data/observations, or technical instructions, or conceptual understanding |
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