

GAS

Name: _____

Partner's Name(s): _____

Lab Date: _____ Lab Instructor's Name: _____

EXPLORING THE GAS LAWS WITH ALKA-SELTZER® LAB NOTEBOOK PAGES

All purpose, procedure(s), and data/observations must be recorded in the lab notebook in pen with permanent, waterproof ink (black or blue). Pencils, markers, highlighters, and correction fluid (white-out) are not permitted. No information can be recorded elsewhere and transferred after leaving the lab. Lab notebooks can be digital or paper; you may write directly on the lab notebook pages in your lab manual or download a digital copy onto your electronic device and then write in it. Refer to the Guide for Success in the General Chemistry Laboratory section in the front of this lab manual for more detailed instructions.

- ⦿ **Before Lab:** Make sure to complete the Purpose and Procedure sections as well as any required data tables in the Data and Observations section in your lab notebook pages.
- ⦿ **After Lab:** Upload your notebook pages to the appropriate Carmen assignment within 48 hours after the start time of your in-person lab session. If you used the notebook pages in your paper copy of your lab manual, you should scan or take photos of the pages. Do not remove them from your lab manual. Refer to the GAS Notebook upload assignment in Carmen for more detailed instructions.

PURPOSE _____

Describe the what, why, and how of the experiment in bullet points or a few sentences. Consult the Expected Learning Outcomes and the procedure for the experiment to develop the purpose.

PROCEDURE CITATION _____

Chemistry 1910H: General Chemistry Laboratory Manual, Fall 2025.; Weaver, T. A., Opoku-Agyeman, B., Fontes N. Da Silva, C., Welch, A. N., Stern, J. E., Wroblewski, R. A., Walter, C., van Helmond, A. Eds.; Van-Griner Learning: Cincinnati, OH; pp. 177–123.

PROCEDURE

PART A. ANALYSIS OF ALKA-SELTZER

Before Lab: Write a *step-by-step* procedure you plan to use. Be as detailed as possible.

During Lab: Note any updates/adjustments you made to your procedure before you leave the lab.

PART B. ANALYSIS OF ANTACID TABLET

Before Lab: Write a *step-by-step* procedure you plan to use. Be as detailed as possible.

During Lab: Note any updates/adjustments you made to your procedure before you leave the lab.

PART C. PRODUCING CO₂ IN A CLOSED CONTAINER

Before Lab: Write a *step-by-step* procedure you plan to use. Be as detailed as possible.

During Lab: Note any updates/adjustments you made to your procedure before you leave the lab.

CLEAN UP AND WASTE DISPOSAL

All solutions may be poured down the drain with a large amount of running water. Any remaining solids should be disposed of in the trash. Any solids cleaned up from the balance area must be disposed of in the class Chemical Waste beaker. Dry the plastic bin with a paper towel, place the plastic tubing back in the bin and return it. Large (50-mL) test tubes should be cleaned and returned to the proper drawer. After cleaning up, wipe down your work area with 70% ethanol spray and a paper towel. Wash your hands thoroughly after completing this experiment.

DATA AND OBSERVATIONS

PART A. ANALYSIS OF ALKA-SELTZER

Before Lab: Create your own Data and Observations section. We recommend making a table similar to the ones used in previous experiments.

During Lab: Make adjustments as needed to accommodate the procedure you actually used. Use a single line to cross out unnecessary items. Be as detailed as possible when recording data and observations. Record all masses, volumes, pressures, and temperatures with units and appropriate significant figures.

PART B. ANALYSIS OF ANTACID TABLET

Before Lab: Create your own Data and Observations section. We recommend making a table similar to the ones used in previous experiments.

During Lab: Make adjustments as needed to accommodate the procedure you actually used. Use a single line to cross out unnecessary items. Be as detailed as possible when recording data and observations. Record all masses, volumes, pressures, and temperatures with units and appropriate significant figures.

PART C. PRODUCING CO₂ IN A CLOSED CONTAINER

Before Lab: Create your own Data and Observations section. We recommend making a table similar to the ones used in previous experiments.

During Lab: Make adjustments as needed to accommodate the procedure you actually used. Use a single line to cross out unnecessary items. Be as detailed as possible when recording data and observations. Record all masses, volumes, pressures, and temperatures with units and appropriate significant figures.

