

Experiment 7: Analysis of a Gaseous Product

Version 2

Name: _____ **Date:** _____

Lab Partner: _____ **Section:** _____

Experimental Data and Calculations

Unknown Sample Number _____

Table 1. Mass of Unknown Sample Used

	Trial 1	Trial 2	Trial 3
1) Mass of weighing boat ()			
2) Mass of weighing boat + sample ()			
3) Mass of sample ()			

Table 2: Determination of Temperature and Volume of the Carbon Dioxide Gas Collected

	*Trial 1	Trial 2	Trial 3
1) Adjusted water level after reaction done (student's signature)			
2) Temperature of CO ₂ ()			
3) Volume of CO ₂ ()			
4) Temperature of CO ₂ (K)			
5) Volume of CO ₂ (L)			

* Show calculations for Trial 1 here:

Name: _____

Table 3: Determination of the Pressure of the Carbon Dioxide Gas Generated

	*Trial 1	Trial 2	Trial 3
1) Barometric Pressure (inches of Hg)			
2) Vapor Pressure of H ₂ O () (Appendix 5)			
3) Barometric Pressure (atm)			
4) Vapor Pressure of H ₂ O (atm)			
5) Vapor Pressure of CO ₂ (atm)			

* Show calculations for Trial 1 here:

Table 4. Percent by Mass of Calcium Carbonate in Unknown Sample Number _____

Trial #:	% Calcium Carbonate
1) Trial 1**	
2) Trial 2	
3) Trial 3	

** Show calculations for trial 1, mean, standard deviation and relative percent error on next page.

Table 5. Results Summary

1) Mean percent by mass of calcium carbonate	
2) Standard deviation of the percent by mass of calcium carbonate	
3) Relative percent error of the mean percent by mass of calcium carbonate	

Report: Hand in all sheets of the experimental data, calculations, and write a conclusion.