

Name: _____

Band: _____

Lab 3.2
Density of Gases

Step	Measurement	Explanation	Trial 1	Trial 2	Average
1	Mass of flask, water, and alka seltzer <i>Use about 100 mL H₂O</i>	Before the Reaction: <i>Tablet mass + flask with water mass = →</i>			
2	Mass of flask, water, and alka seltzer residue	After the Reaction			
3	Difference	Subtract 1 and 2 <i>This is the CO₂ mass.</i>			
4	Beginning Volume	mL of water in collecting bottle			
5	Ending Volume	mL of water in collecting bottle			
6	Difference	Subtract 4 and 5 <i>This is the CO₂ volume.</i>			
7	Calculate the Density	$D = \frac{\text{Mass}}{\text{Volume}} = \frac{\text{g}}{\text{mL}}$			
8	Percent Error CO ₂ = .0018 = .002 g/mL	$\frac{\text{Yours} - 0.002}{.002}$			

1. Compare the Density of a gas to that of a solid or liquid.

2. Using Table 2.8, on page 46 of your text book, compare the density of CO₂ to 3 other gases.

3. Would liquid hydrogen have a lesser or greater density than gaseous hydrogen? Why?

4. What happens to the density of air as you increase in altitude? Why does this happen?

5. What is the mass of 50 mL of ethyl alcohol, which has a density of 0.79 g /mL?
