Lab One: Episode 702—Datasheet **Name _____**

I. Fill in the data table below as you watch the lab on the video.

mass of sodium bicarbonate	
mass before reaction	
mass after reaction	

II. Write a balanced equation for the reaction that took place. (Hint: the narrator on the video will help you with this.)

III. Conclusion Questions: Answer each question completely. SHOW ALL WORK!

- Calcuate the mass of carbon dioxide produced in the experiment. (Hint: Think about what bubbled away.)

- Use molar masses to calculate the percent of carbon in carbon dioxide using the following formula.

$$\%\ C \text{ in } CO_2 = \frac{\text{mass of } C}{\text{mass of } CO_2} \times 100\%$$

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- Calculate the mass of carbon in the sample of carbon dioxide using the same formula and your answers to the previous two calculations.

- Calculate the percentage of carbon that was in the original sample of sodium bicarbonate using the following formula.

$$\%\ C \text{ in } NaHCO_3 = \frac{\text{mass of } C}{\text{mass of } NaHCO_3} \times 100\%$$

IV. Practice Problems. SHOW ALL WORK!

- Calculate the percentage sodium in sodium oxide.

- Calculate the percentage aluminum in aluminum phosphate.

- Calculate the percentage hydrogen in hydrogen peroxide.

- Calculate the percentage nitrogen in dinitrogen pentoxide.

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