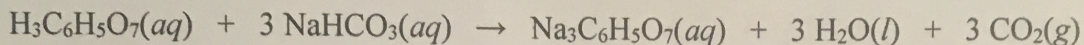


### Instructions

Make sure to use the correct number of significant figures and units when you answer questions. To complete a box titled "Measured", copy your measurement that you made in the previous week. The total points of completing four tables is **12 points**. One point will be deducted for each missing units or incorrect number of significant figures or missing entry or incorrect measurement. Make sure to use "grams" as the units of mass.

The reaction of citric acid and sodium bicarbonate is written as



### Part A: Equivalence Amounts

#### Plastic Cup A Experiment

Measured Mass of $\text{NaHCO}_3$	Measured Mass of $\text{H}_3\text{C}_6\text{H}_5\text{O}_7$	Measured Mass of $\text{CO}_2^*$
1.08g	0.71g	0.56g

\*The mass of carbon dioxide is "indirectly" measured and recorded in Box "6" in Data Section for Cup A.

1. Show that the equivalence amount of citric acid for 1.00 g of sodium bicarbonate is 0.76 g. (5 pts)

2. Calculate the theoretical yield of carbon dioxide from 1.00 g of sodium bicarbonate. (5 pts)

3. What is the actual yield in this cup A experiment according to your data? (5 pts)

4. Calculate the percentage yield in the plastic cup A experiment. (5 pts)