

Lab Instructor: _____

Name: _____

DATA

1. Mass of heated and cooled crucible and cover	
2. Mass of crucible, cover, and sodium bicarbonate	
3. Mass of sodium bicarbonate used	
4. Mass of crucible, cover, sample after first heating	
5. Mass of crucible, cover, sample after second heating	
6. Mass of crucible, cover, sample after third heating (if needed)	
7. Mass of the sample only (subtract the mass of the crucible) after the final heating	

CALCULATIONS (Show all calculation setups, including units)

Show work here	Result
8. Balance reactions A and B here. A B	
9. Mass of Na_2CO_3 formed in theory from the mass of NaHCO_3 you used, assuming reaction A.	
10. Mass of Na_2O formed in theory from the mass of NaHCO_3 you used, assuming reaction B	

11. Compare your observed mass of product with those predicted in #9 and #10 above. Which product was actually formed? How do you know?

12. Percent yield of the reaction

13. Does the result for the percent yield make sense? Explain.

14. What happened when you added HCl to your product? Did this test confirm your results or not?

Questions

1. If the reaction did not go to completion, would the mass of the residue in the crucible be more or less than it should be? Explain.

2. If you started with 2.486 g of sodium bicarbonate and heated it to constant mass, what would the mass of the residue be after the reaction? Show your work.