

Name:

Lab Partner:

Experiment 7 Post-Lab Sheet

Results

Data (4 pts)

mass of crucible and cover	
mass of crucible, cover and NaHCO_3	
mass of crucible, cover and product	
theoretical yield of Na_2CO_3	
theoretical yield of Na_2O	
mass of product	
identity of product	
% yield of product	

(2 pts) Show how you calculated the theoretical yield of Na_2CO_3 . Include units!

(1 pt) Show how you calculated the % yield:

Discussion

1. (2 pts) How many significant figures should your % yield have? What error range does this imply? Does 100% fall within the error range of your % yield?
2. (1 pt) If the reaction did not go to completion (finish), would the % yield be greater than 100% or less than 100%? Be careful—how do you measure the yield?

3. (2 pts) Explain **all** the evidence that helps you identify the product.

4. (2 pts) If your % yield is 99.8%, does this mean you should be 99.8% certain of the identity of the product? Explain.

5. (1 pt) Does 100% yield mean 100% purity? Explain.

6. (2 pts) Do the chemical tests prove that carbonate is present, that oxide is absent, or both? Explain briefly.

7. (3 pts) Could your product be a mixture (of any ratio, 1:1, 99:1, etc) of Na_2O and Na_2CO_3 ? Discuss what **your experimental results** indicate about whether it is or isn't a mixture.