

Substitution Reaction Notebook Guideline  
Project 6.2

Include a Main Reaction and table of data:

Molecular Weight			
Grams			
Moles			
Density			
Volume			
Limiting, excess, or catalytic?			

Observations: Decide for yourself what is appropriate.

Results: For a distillation, you should definitely include the boiling point range of what distilled. What other data do you generally collect? What other data will be needed to answer the discussion questions?

Discussion:

Draw a reasonable mechanism for the formation of 2-chloro-2-methylbutane.

This reaction occurred so fast that you had to be careful. Why? (Refer to your mechanism to answer this question.) If you tried to make 1-chlorobutane from 1-butanol, would you have the same problem or a different problem. Elaborate.

Why did two layers form in your separatory funnel after the initial reaction when there was only one to start with?

After you drained the lower aqueous layer from the initial reaction, you washed the organic layer with sodium bicarbonate. Why did you do this? What caution did you have to take?

How can your distillation data be used to determine if your product was pure or not? Based on your data, was your product pure?

What was the percent yield of your final product? Show your calculation.