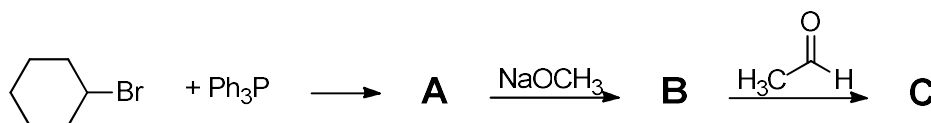


# Experiment 20

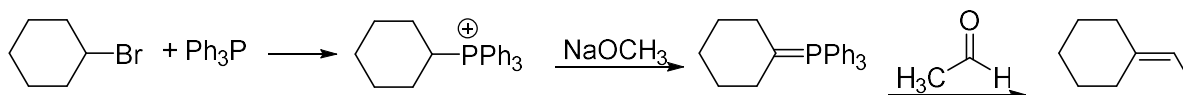
## Wittig Reaction: Alkenes from Carbonyl Compounds

### Study Questions

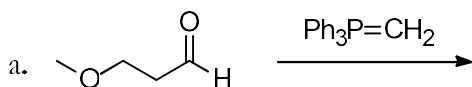
- 1) Why is it important that the aldehydes added to the ylide be free of carboxylic acids? (Hint: consider what a proton will do if added to the ylide.) **Answer:** Because the acidic proton on the carboxylic acid will protonate the negatively charged carbon, destroying the ylide.
- 2) Give the structures of compounds A, B, and C in the following Wittig reaction sequence:



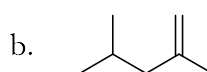
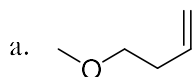
**Answer:**



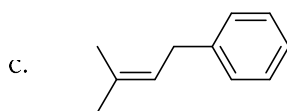
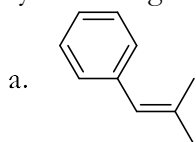
- 3) What is the major product of each of the following reactions?



**Answer:**



- 4) What alkyl halide and what aldehyde or ketone would you use to synthesize the following compounds by the Wittig reaction?



**Answer:**

Experiment 20: Wittig Reaction

