

### Experiment 16: Grignard Reaction with a Ketone Part 1: Triphenylmethanol

#### Objective:

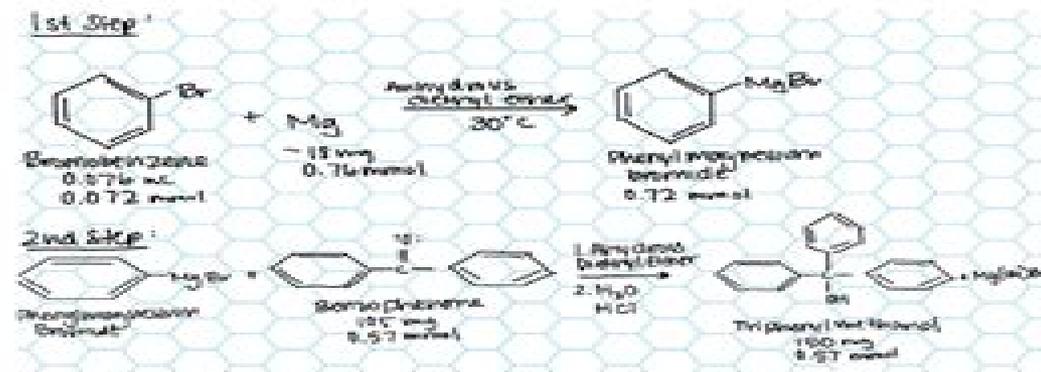
The objective of this experiment is to investigate a Grignard reaction with a ketone reagent: Benzophenone in order to produce a tertiary alcohol: Triphenylmethanol. Techniques we will be required to perform during this lab include solvent extraction of organic and aqueous layers, correct use of syringe needles and pipettes for accurate dispensing, and drying the solution with sodium sulfate. We will be practicing working with air-and-moisture sensitive materials along with using new materials such as a Claisen Adaptor fitted with a Drierite drying tube. Conditions of this experiment will be kept anhydrous to prevent moisture from contaminating the reaction.

#### Procedure:

The experiment was performed according to pages 276- 282 in the Microscale Organic Laboratory Manual by Mayo, with modifications posted on the canvas document. Additional modifications to the procedure included the following:

- Add anhydrous ether using a syringe needle into an already closed conical vial.
- Use an automatic pipet to dispense 76  $\mu\text{L}$  of bromobenzene.
- Dispense bromobenzene into a centrifuge tube instead of a glass vial.
- Add benzophenone solution to Grignard reagent over 30 minutes instead of 30 seconds in order to get gentle reflux.
- Place the extracted layer into a small beaker instead of an Erlenmeyer flask.
- Dry solution with 250 mg of sodium sulfate.
- Used glass pipet to extract the final product onto a labeled test tube.

#### Reaction Scheme:



# Grignard Reaction Lab Report

**Research Association of British Paint,  
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