**Aldol Condensation: Synthesis of Chalcones**

**Introduction**

The main purpose of this lab is to synthesize the Chalcones from an Aldol condensation of an aromatic ketone and aldehyde.

Reaction



Theoretical Yield

Since it’s a 1:1 ratio, if 2.5mmol of benzaldehyde and acetophenone derivatives are being used then 2.5mmol of chalcone should be isolated in the end.

*Safety Precautions*

*NaOH pellets are caustic. Many of the starting acetophenones and bnzaldehydes are irritants. Most of the Chalcones are strong irritants. Never touch your face with your gloves on.*

*Wastes*

*Aqueous Waste: Water washes of the reaction mixture.*

*Solid Chemical Waste: All Chalcone products, pipets, melting point tubes, and coverslips.*

**Procedure**

1. ­One of the synthesis of chalcones will be assigned.
   1. Weigh out 2.5mmols of benzaldehyde derivative and 2.5mmol of acetophenone derivative.
   2. Place both in a mortar
2. Collect 1 pellet of NaOH
   1. Add it to the mortar
3. Use pestle, grind the mixture for around 5-10 minutes.
   1. Grind it until the mixture starts solidifying and/or has a powder like texture.
4. Add 10mL of water to the mortar
5. Mix it
6. Set up the Buchner funnel with vacuum filtration
   1. Rinse the mortar and add it to the funnel
7. Weigh the product and determine the melting point
8. Weigh 20-30mg and place it into a clean vial
   1. With your assigned number, lab section, and name for NMR analysis.