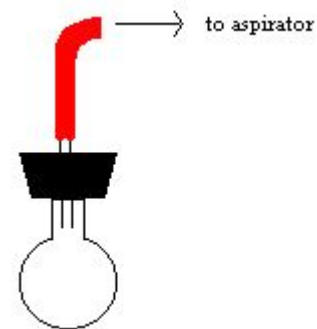


Purpose: To make methyl salicylate from the esterification of salicylic acid.

1. In a long fat test tube (20x180 mm), place 1 gram of salicylic acid and 3 ml of methanol. Mix the reagents by swirling. **Carefully** add 1 ml of concentrated sulfuric acid mixing by swirling after each drop. Take note of any temperature changes. A white precipitate may form. Attach the condenser if you have not already done so.
2. Add a boiling stone to the flask and reflux for 1 hour or until you see the mixture get cloudy as a second layer forms. My reaction seemed to take 1.25 hours.
3. Allow the mixture to cool to room temperature. (IMPORTANT!) Extract the methanol mixture twice with methylene chloride. (CH₂Cl₂ is not miscible with methanol.)
4. Combine the CH₂Cl₂ extractions in either a very large test tube or a small Erlenmeyer flask. Carefully wash the extracts with 3 ml of a 5% NaHCO₃ solution. **THERE WILL BE SOME H₂SO₄ in the CH₂Cl₂.**
5. Wash the product containing solution with saturated NaCl (or at least 1M NaCl).
6. Dry product over Na₂SO₄. Filter. Remove solvent under reduced pressure.
7. Check purity using TLC and refractive index. Find % yield.



Postlab Questions.

1. This lab involves 2 extractions and three washes.
 - Make a flow chart showing where your product is at each step.
 - Why do we do each of these extractions/washes?
2. What is the organic chemistry definition of extraction and wash?
3. What is the difference between the two?
4. Please write the mechanism for the reaction