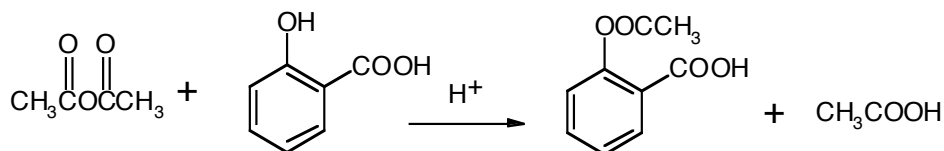


Names: _____

Introduction to Organic Synthesis (Prelab-A)

1. Complete the following information.



Molecular

Formula _____

Molar

Mass _____

Density _____

m.p. °C _____

b.p. °C _____

Calculate the relative amounts (g) of 20. mmols of salicylic acid and 20. mmols of aspirin, and the amount (g) with corresponding moles of 5.0 mL of acetic anhydride.

Mass (g) _____

moles _____

Circle the limiting reagent in the reaction.

2. What is the molecular formula tubocurarine, the physiologically active ingredient in curare?

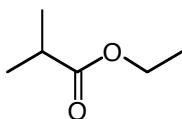
Draw a line structure for the compound and in a few words describe its biological activity.

3. Name the acid and name the alcohol that would be reacted to produce each of the following esters.

Apples:

Acid:

Alcohol:



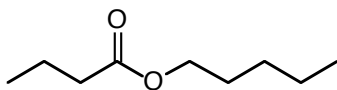
4. Draw structures for the ester, and the acid and the alcohol that would be reacted to produce the ester.

Oranges: octyl acetate

Acid:

Alcohol:

5. The following ester gives apricot is flavor. Name the ester. _____



6. Draw the structure of the product produced in the acid catalyzed reaction of 2-butanol with salicylic acid.

7. Describe what would be expected in the differences between the IR spectrum of the reaction mixture of the reactants versus the products. That is, what key peaks are expected to be observed in each and what disappearance(s) or appearance(s) would indicate that the reaction had occurred?