

Name: _____

Lab Section: _____

1. Conversion of isopentyl alcohol to isopentyl acetate is an example of a Fisher esterification. Draw the complete mechanism of this reaction using the curved arrow convention, showing all reaction intermediates and products (15 points).

2. The crude purification of the reaction product is done using extraction in a separatory funnel. Explain each extraction step given below: (12 points)

a. *Initial wash with deionized water*

What reactants/products are dissolved in the water layer?

What reactants/products are dissolved in the organic layer?

b. *Wash with 5% sodium bicarbonate*

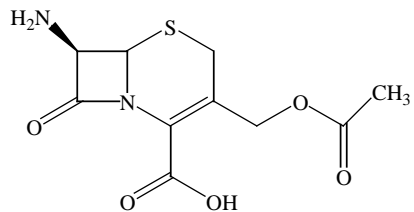
What reactants/products are dissolved in the water layer?

What reactants/products are dissolved in the organic layer?

Organic Chemistry Laboratory II
Synthesis of Banana Oil (Esterification)

Worksheet

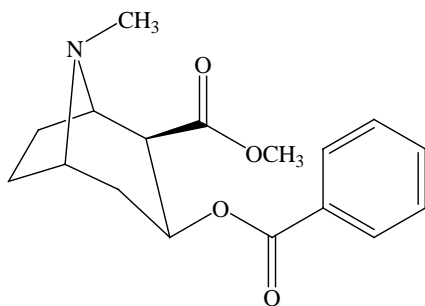
5. Suggest an alcohol and carboxylic acid that could be used to prepare each of the following esters using the Fisher esterification (15 points).



7-Aminocephalosporanic acid

Alcohol

Carboxylic Acid



Alcohol

Carboxylic Acid