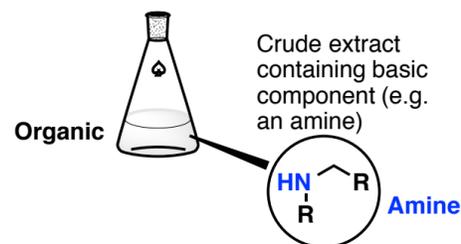
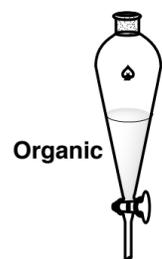


Separating a Basic Compound (e.g. Amine) From A Crude Mixture

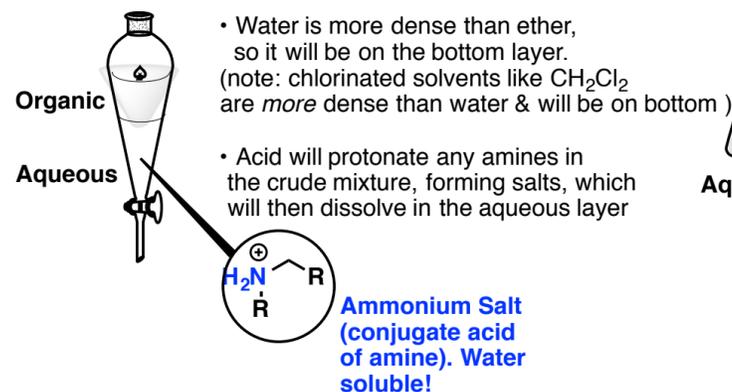
Step 1: Dissolve crude mixture in organic solvent (e.g. diethyl ether, $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$)



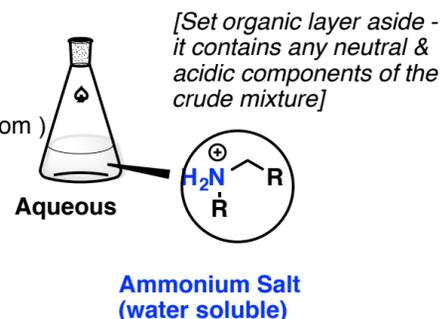
Step 2: Transfer to Separatory Funnel



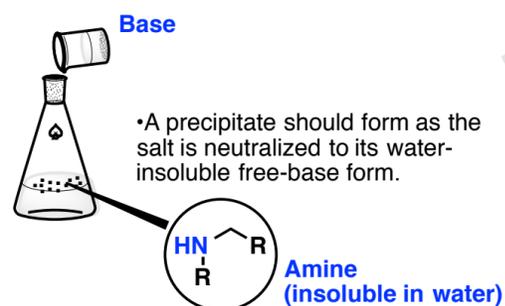
Step 3: Add solution of aqueous acid (e.g. 2M H_2SO_4) and shake vigorously



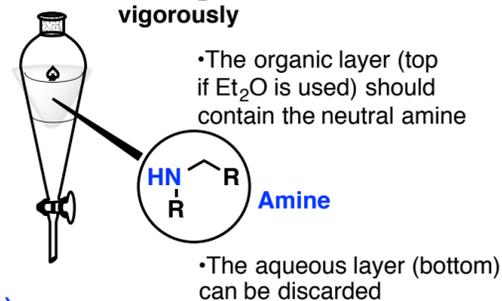
Step 4: Collect Aqueous Layer



Step 5: Adjust pH of aqueous layer to pH >14 with concentrated base (e.g. 6M NaOH)



Step 6: Transfer to separatory funnel, add organic solvent (e.g. Et_2O) and shake vigorously



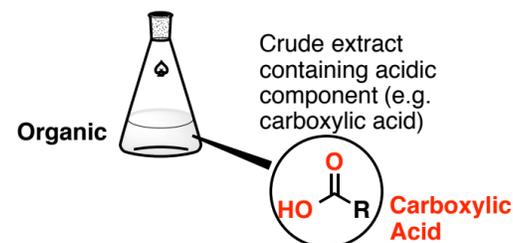
Step 7: Collect the organic layer and remove solvent (e.g. using a rotary evaporator)



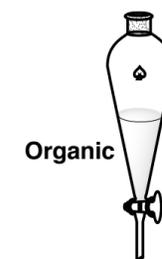
Separating an Acidic Compound (e.g. Carboxylic Acid) from A Crude Mixture

This is conceptually similar to the procedure on the left, except that we will convert the neutral compound to a salt by using base, and do the final neutralization using acid

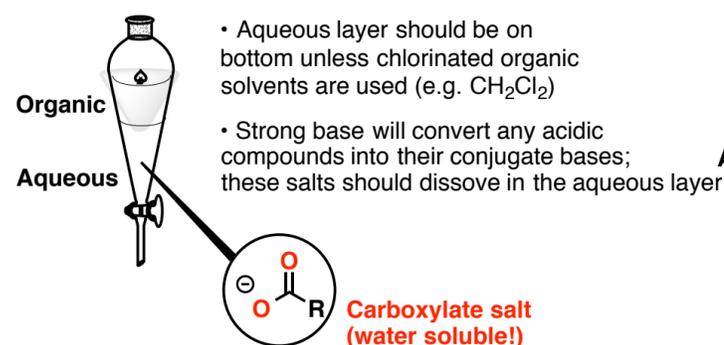
Step 1: Dissolve crude mixture in organic solvent (e.g. diethyl ether, $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$)



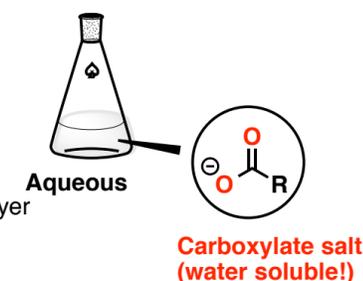
Step 2: Transfer to Separatory Funnel



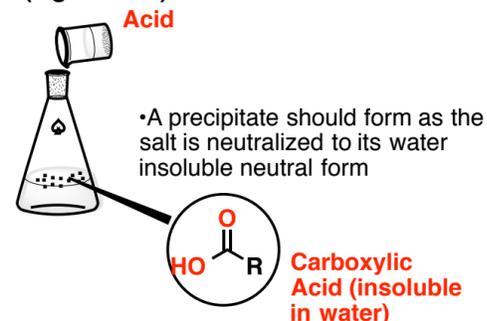
Step 3: Add solution of strong base (e.g. 2M NaOH) to adjust pH to 14 and shake vigorously



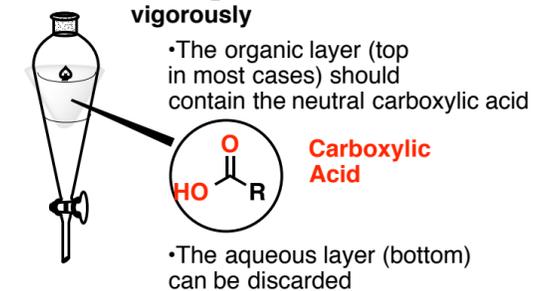
Step 4: Collect Aqueous Layer (set organic layer aside)



Step 5: Adjust pH of aqueous layer to pH 1 with concentrated acid (e.g. 6M HCl)



Step 6: Transfer to separatory funnel, add organic solvent (e.g. Et_2O) and shake vigorously



Step 7: Collect the organic layer and remove solvent (e.g. using a rotary evaporator)

