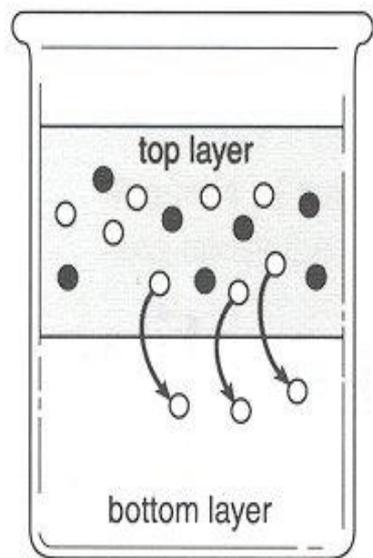


**Separation based  
upon acidity,  
basicity and  
solubility**

# Separation Processes

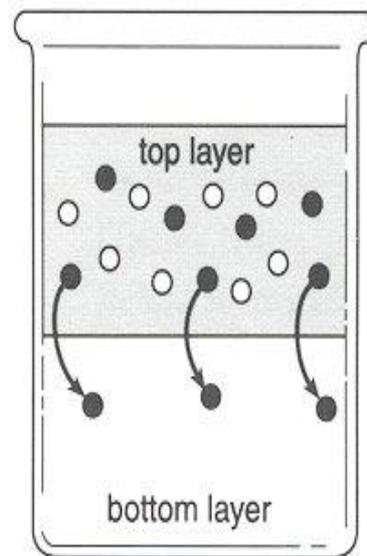
Is used to transform a mixture of substances into two or more distinct products.

The separated products could differ in chemical properties and/or some physical properties



○ desired compound  
● impurities

**Extraction**



○ desired compound  
● impurities

**Washing**

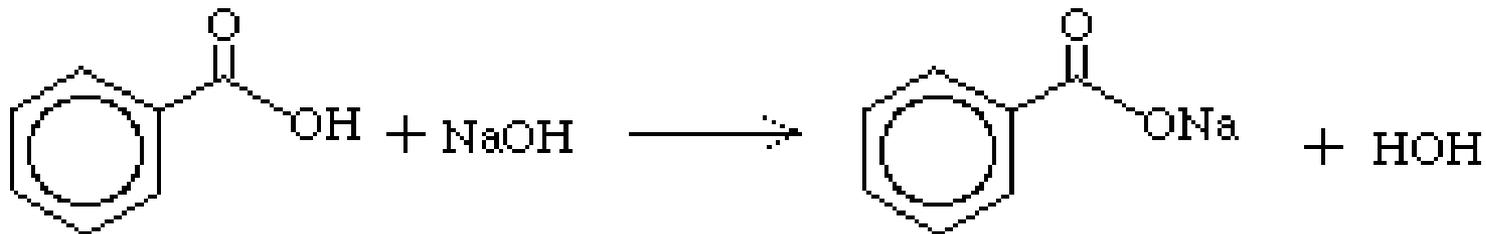
# Separation Techniques

- Filtration
- Evaporation
- Crystallisation
- Chromatography
- Centrifugation
- Decantation
- Sublimation
- Extraction
- Magnetic Separation

# Organic acids

**Separated or extracted by reaction  
with bases**

The most common strong organic acids are the **carboxylic acids -COOH.** and the **sulfonic acids -SO<sub>2</sub>OH,**



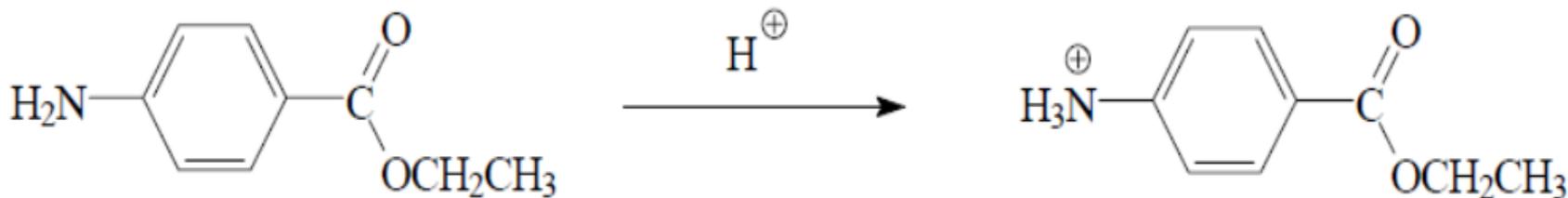


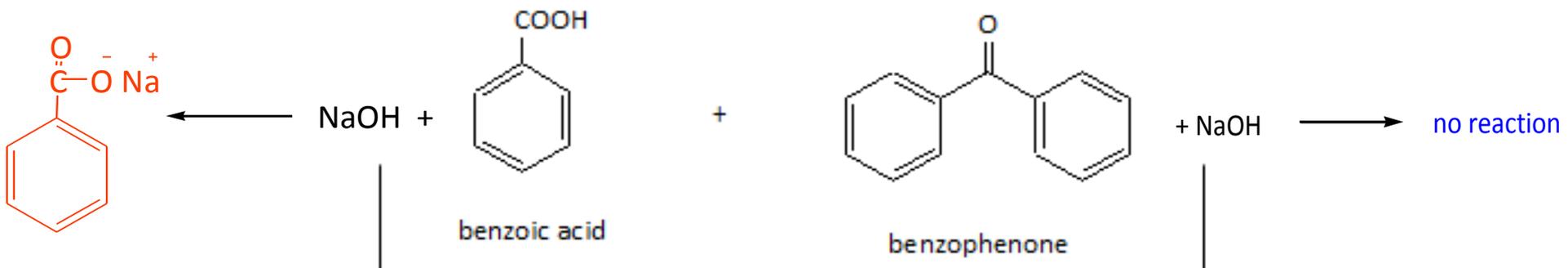
**Other groups can also show relatively weak acidity, the **enol** and the **phenol** groups.**

# Organic Bases

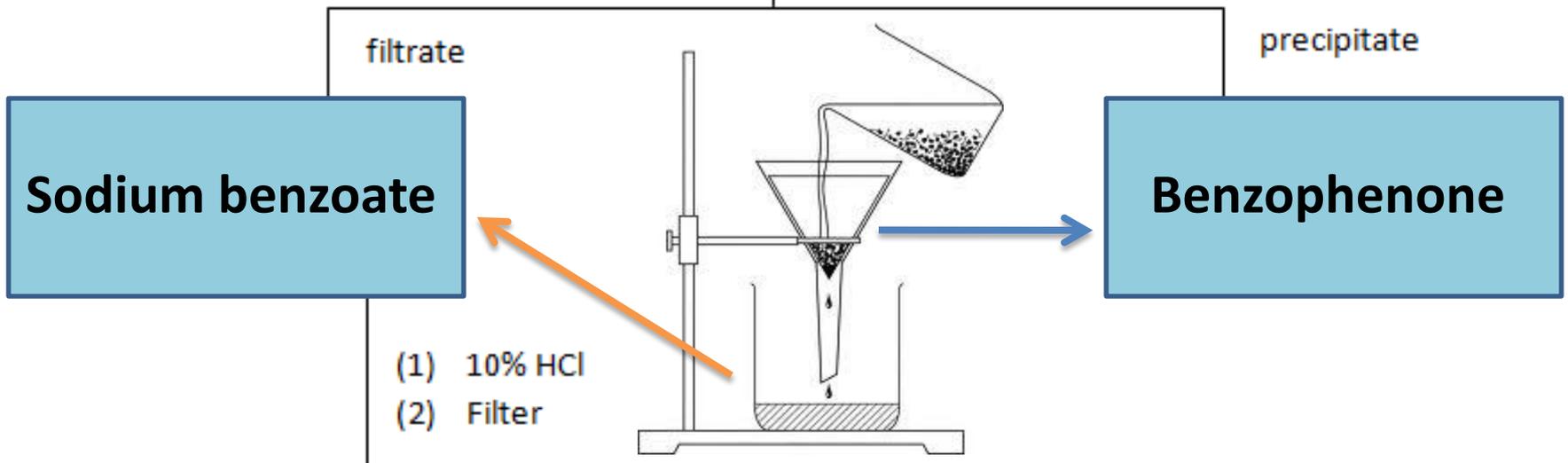
Separated by reaction with acids

Organic bases are usually proton acceptors. e.g. amines and, nitrogen-containing heterocyclic compounds which can easily be protonated

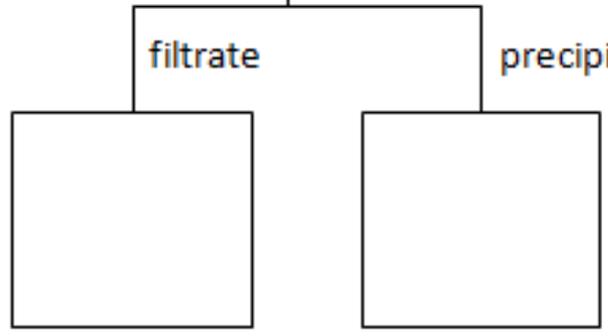




- (1) Extract with 10% NaOH
- (2) Filter



- (1) 10% HCl
- (2) Filter



**Q.**

**How can you confirm the identity of the separated compounds and test their purity?**