

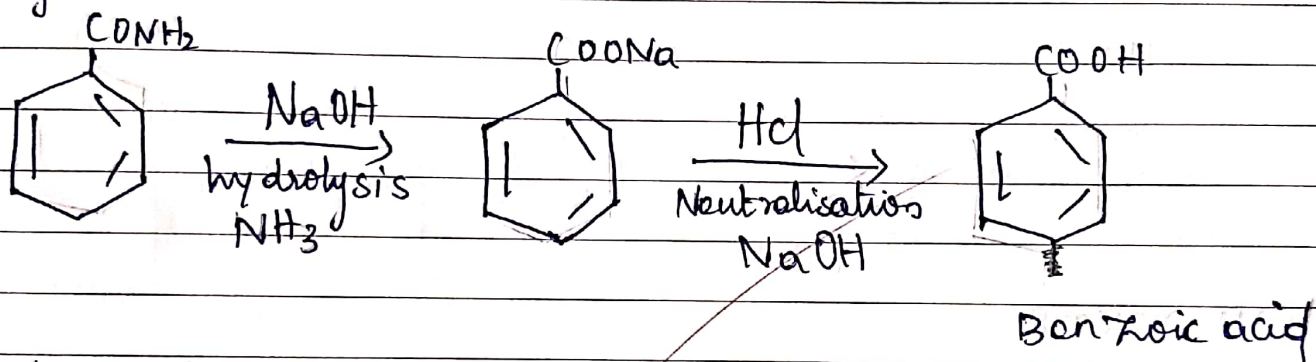
Aromatic acid from benzamide (Amide).

Aim :-

The crystals of benzoic acid are readily obtained by the alkaline hydrolysis of Benzamide.

Principle :

Amides are hydrolysed by strong solution of alkaline sodium salt of the acid obtained is neutralized with a mineral acids con. HCl when benzoic acid is precipitated as white crystal.



Chemical required :

- 1) Benzamide - 5g
- 2) 10% Sodium hydroxide solution - 30 ml

Procedure :

About 5g of benzamide and 30 ml of 10% NaOH solution are placed in R.B. flask. A few porcelain chips or a glass bead is introduced into it. The flask is fitted with reflux condenser and held in position. It is

heated on a wire gauze until ammonia gas liberating Benzamide are seen in the RB flask. The heating is then discontinued and the flask is cooled. The contents are poured into a tapers containing 200 ml water and stirred well. About 10 ml of 1:1 HCl solution is added in small quantities at a time till the solution is slightly acidic. It is tested by placing a drop of the solution on a blue litmus paper which turns red. A white precipitate of benzoic acid crystals is readily formed in the beaker on cooling. It is filtered off using Buchner funnel, washed with water and dried.

Recrystallization :

About 1 g of the benzoic acid dissolved in boiling water and recrystallised white crystals of benzoic acid are separate and dried.

Report :-

The yield of benzoic acid

Crystals = 1.674 gm

Melting point

= 121°C