**Benzoic Acid From Benzyl Chloride**

**Preparation of Benzoic Acid From Benzyl Chloride**

**Preparation of Benzoic Acid from Benzoyl chloride**

In this reaction a side chain oxidation is performed. In order to achieve this benzyl chloride is mixed with sodium carbonate solution and is oxidized with potassium permanganate solution. The sodium salt of benzoic acid is formed, this is acidified with concentrated hydrochloric acid when benzoic acid crystallizes out. Preparation benzoic acid benzyl chloride

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**Reagents**

* Benzyl chloride 2 ml
* Anhydrous sodium carbonate 2 g in 20 ml of water
* Potassium permanganate 8 g in 80 ml water

**Procedure:**

About 2 ml of benzyl chloride is added to a solution of about 2 g rams of anhydrous sodium carbonate dissolved in 20 ml of distilled water. The mixture is taken in a round bottom flask. The round bottom flask is fitted with a water refulx condenser and heated . 4 gams of potassium permanganate in 80 ml of water is added in small quantities through the water condenser until a permanent pink color persists even after continuous boiling. It is boiled for about 1 hour. The mixture is not transferred to a beaker. About 4 grams of sodium sulfite are added to this mixture. Now add concentrated hydrochloric acid to this solution until the solution is acidic. The solution is cooled, precipitated benzoic acid is filtered and washed. The acid is recrystallized from boiling water.
The yield of benzoic acid is about 2 grams and the melting point is 1210C
Care should be taken while setting up the equipment’s, the hydrochloric acid used in converting the sodium salt of benzoic acid is concentrated, so extreme care should be taken while handling the chemicals and using them. Wear goggles , gloves and apron while performing the experiment. Use common sense while performing any lab activity and read your lab manual before doing any experiment.